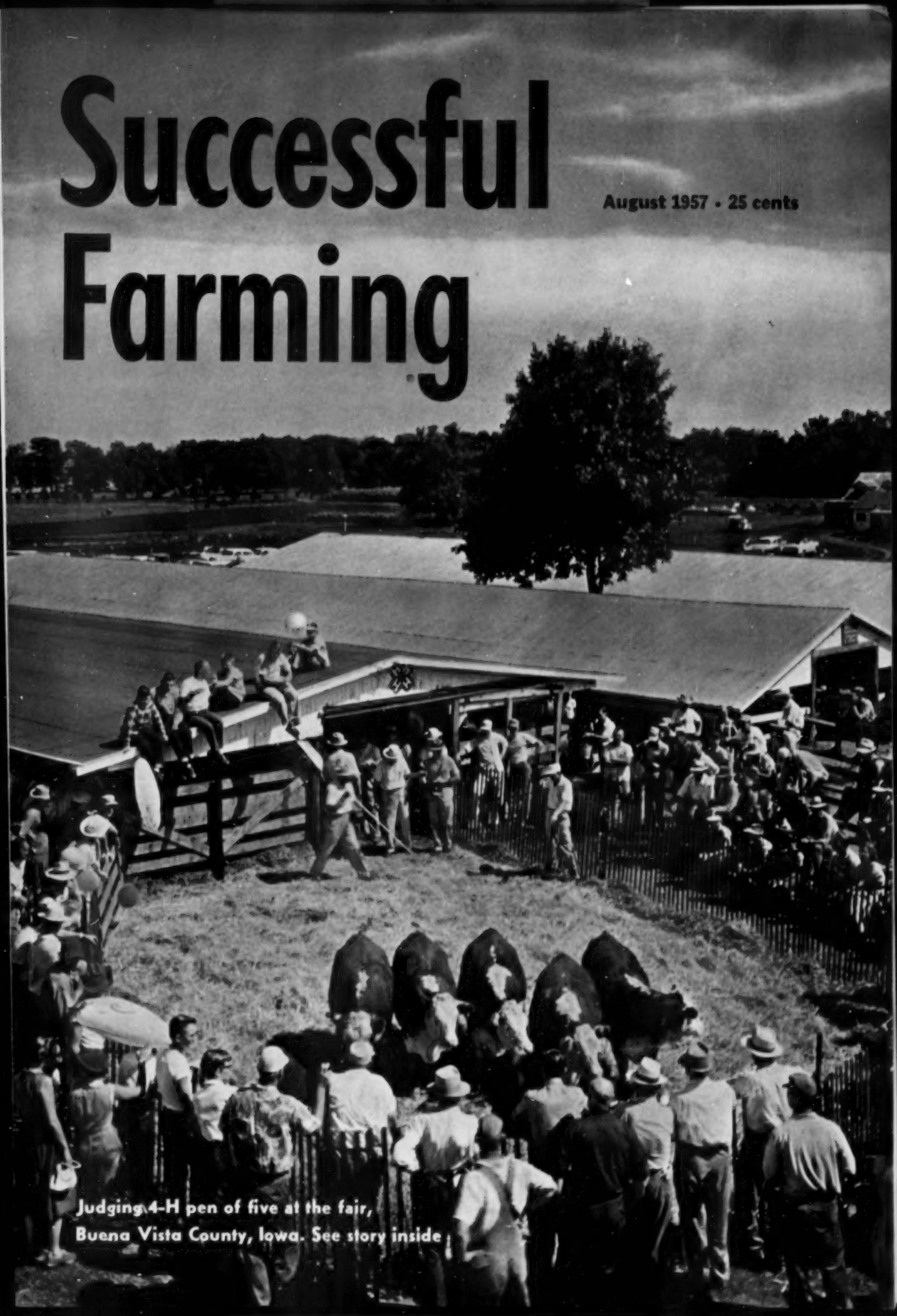
Successful Farming

August 1957 • 25 cents



Judging 4-H pen of five at the fair, Buena Vista County, Iowa. See story inside

How about a new color scheme for your home?

More beauty . . . More protection . . . For more years with

SUN-PROOF®

AMERICA'S FINEST HOUSE PAINT

The only house paint with fume-resistant pigments and Vitolized Oil®

You'll cover your home with sparkling new beauty that looks *"just-painted"* years longer when you paint it with SUN-PROOF.

• **No other house paint** gives you such *enduring protection.* Only SUN-PROOF is made with fume-resistant pigments and special Vitolized Oil for greater resistance to weather-wear, fuel fumes.

• **With SUN-PROOF'S** range of *more than a hundred* Maestro Colors® you can "perk up" your home with a fresh new color scheme that's distinctively your own.

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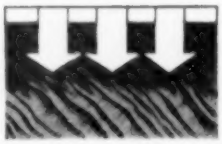
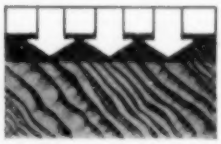
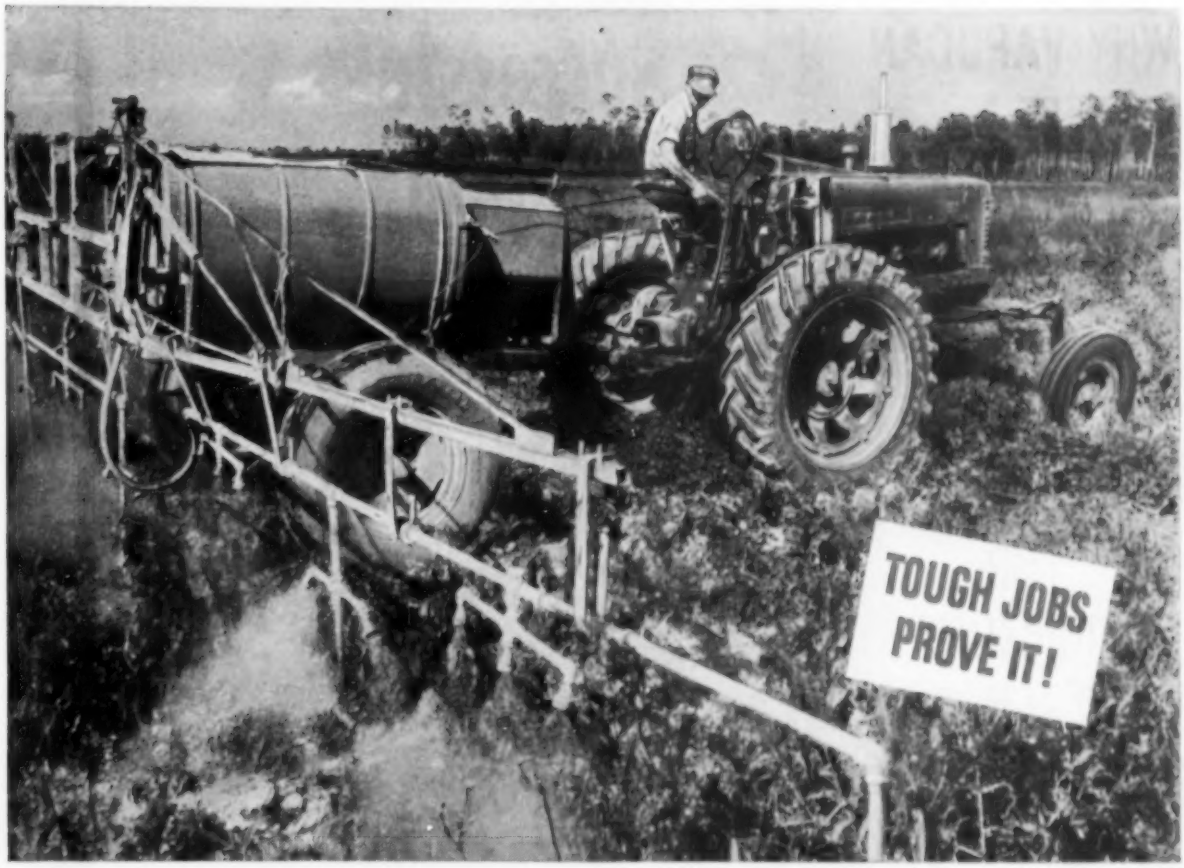
Controlled Oil Penetration Makes SUN-PROOF Look Better Longer!



Much of the oil in ordinary paint soaks into the surface being painted. This leaves the paint coat starved and brittle—ready to crack and peel with weather changes.



SUN-PROOF'S Vitolized Oil is treated to control penetration. Only enough oil goes into the wood to insure a firm bond. The rest stays in the paint film to resist weather.



How Wedge-*in* action helps you spray crops faster–

See why Super-Sure-Grip does more work faster, lowers tire costs–

LONGER, RULER-STRAIGHT LUGS—ANGLE-ENGINEERED to converge at shoulders (A)—to take *"Wedge-In"* bites for the most powerful pull!

O P-E-N C-E-N-T-E-R—self-cleaning, helps lugs bite deeper.

GREATER AIR-VOLUME—for more flexibility, better ground contact, bigger loads and easier ride.

LONG, EVEN WEAR—lugs work evenly, roll smoothly—and so wear slowly and evenly!

STRONGER BODY—gives added protection for long, tough service. Goodyear, Farm Tire Dept., Akron 16, Ohio.

Super-Sure-Grip—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

500 gallons of spray-mix is a mighty dead drag—the 50-foot sprayer-span is no cinch to maneuver—and slippery footing is no help at all.

But Super-Sure-Grip *ruler-straight* lugs lend help aplenty! They're *longer* for bigger bites—and "ANGLE-ENGINEERED" to come closer together at the tire's shoulders. This provides traction that holds like a *vise*—boosts you ahead—and comes out clean!

That's Goodyear's exclusive *"Wedge-In"* action you hear so much about—and it's a reason why survey after survey shows—

MORE FARMERS PREFER GOODYEAR TRACTOR TIRES THAN ALL OTHER MAKES *PUT TOGETHER!*

Look for this nearby Goodyear dealer sign for better tire values—better tire care. Convenient credit terms.

GOODYEAR

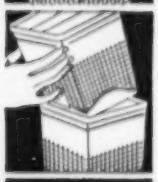
Super-Sure-Grip Tractor Tires

WHY VAPOCAN IS BEST

FOR FREEZING PEACHES

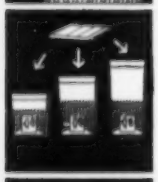
ECONOMICAL. You have nothing else to buy – no inner bag or overwrap. Lids re-usable over and over. Just mark with pencil—erase and wipe off for re-use.

PROTECTS FLAVOR. Vapocan is moisture-proof and liquid-tight. Thermoplastic coating inside and out – seals in flavor and freshness.



SAVES TIME. Rigid and set-up, ready to use. Full-top opening for EASY FILLING. Stiff plastic top seals with single press-on motion.

SAVES SPACE. Square shape saves space in freezer. Lid recessed for safe, easy stacking.



THREE SIZES – pint, 1½ pint, quart. Holds all foods: berries, fruits, vegetables, water-packed poultry and fish, meats, liquids! Same lid fits all three sizes.

Look for this blue carton at all stores and supermarkets. Ten 1½ pint Vapocans – about 69¢. 10 re-usable lids—about 59¢.

VAPOCAN

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CONTAINER CORPORATION OF AMERICA
1301 West 35th Street, Chicago 9, Illinois

Successful Farming®

August, 1957
Vol. 55, No. 8

THE MAGAZINE OF FARM BUSINESS AND FARM HOMES

Management and Business

The farmer's Washington 18
Sell hogs now? 20
Friend to friend 27
Your neighbors say 34
End of an era in farm programs 37
Allow for cattle shrinkage 90
How to outguess the hog market this summer 92

Herds, Flocks, Crops

Soils and crops 6
Dairy 8
Beef 10
Hogs 15
Poultry 16
Big gullies go to grass 42
Hygromycin 48
Performance testing (cover story) 49
Efficiency needn't be expensive 52
Least-cost source of TDN 77
He cut his feed cost one-fourth 100
Veterinary 110

Building and Machinery

What's new in farming 30
Keep cool in summer 38
Equipment for continuous corn 40
Air conditioners cool tractor cabs 64
How to make strong concrete 72
Successful shortcuts 82
Hog-watering ideas 88
How the free-piston turbine engine works 106
All around the farm 116

Successful Homemaking

What's new in homemaking 22
Salads 46
Light for comfortable living 50
Give yourself a center for assembly-line freezing 54
New look for middle-aged kitchen 56
Colorful, handy kitchen helpers 58
Chilly drinks 59
Homemade ice cream 60
For teen-age cooks 81

Family Life and Fun

A thousand miles of excitement 44
Laughing at life 96

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Printed in U.S.A.

Ever see a farm slip through someone's fingers?

You know how "right" the soil feels when it's ready for planting . . . rich with the promise of future yield. But no matter how well the land may produce, its promise of abundance and security for your family would go unfulfilled if the farm itself were lost. And this could happen if you were to die and your heirs were forced to sell all or part of the farm to pay your estate and inheritance taxes.

It happens all too often because some farmers fail to set themselves up so their families are protected against such an occurrence. More and more modern farmers, though, are finding a wonderfully simple way to help keep their farms in the family. They're taking out a low premium Whole Life Policy with New York Life.

Whole Life, issued with a minimum face amount of $10,000, assures your family immediate cash if you should die—cash which can be used to pay taxes, settle debts and obligations . . . perhaps to hire help to keep the farm running. Or, instead of receiving immediate cash, your family can receive a regular monthly income to help with living expenses. If you live, Whole Life builds cash values for you fast—gives you available funds for an emergency or pays you an income at retirement. Yet with all these benefits, premiums are so low they'll fit a thrifty budget.

Look into Whole Life today. The New York Life agent in your area will be glad to give you all the details. And, if you like, he'll help you set up a well-rounded insurance plan to fit your needs. Or just mail the coupon below.

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New York Life, a mutual company, pays dividends to policy owners only. It is one of the strongest legal reserve life insurance companies in the world.

SOILS AND CROPS

Successful Farming Report

WHAT'S NEW...

Overgrazing shortens roots

A 10-year study at the Fort Hays, Kansas, branch experiment station, compared pastures grazed lightly, moderately, and heavily. In heavily grazed pasture, grass roots penetrated less than 5 feet. Under moderate grazing, roots went down 7½ feet, and under light grazing they passed 8 feet!

In dry years, the top 5 feet of soil has little or no moisture in it, and grass roots must go deep to get stored subsoil moisture. Heavily grazed grass lacks the vigor needed for deep root penetration and is the first to be killed by drouth.

Trench-stored silage good after 4 years

Trench silos have proved to be efficient, low-cost storage units for Ralph and Don Morris, Clay County, Missouri. The past season part of the silage they fed had been stored 4 years in a trench silo. The Morrises added new silage to the silo every year but failed to feed it all out in any one season. The past year they fed the entire amount, finding 4-year-old corn silage still O.K.

Uniform packing important in bunker silos

Horizontal bunker silos can provide cheap storage space for silage, but some special precautions are necessary.

Silage needs to be uniformly packed at filling time to keep well in one of these aboveground structures. In tests at the University of Minnesota North Central Experiment Station, Grand Rapids, research workers found in 1955 that silage spoiled along the walls when it was not tightly packed.

In 1956 they packed the silage along the edges equally as well as the center area, then covered it with 6 inches of sawdust. There was no spoilage except for about an inch under the sawdust on top.

New bark-removal method

It's now possible to peel the bark from trees to be used for fence posts while the trees are still growing. Researchers at TVA have found that sodium arsenite applied through girdles in the bark is carried into the sap stream where its action kills the tree. The bark sloughs off easily, posts are then cut and treated with a preservative.

Summer feeding systems compared

Silage and soilage systems were compared in recent University of Minnesota studies.

With the soilage system, also called green-chopping and green feeding, cows were confined to a feedlot and fresh chopped forage hauled to them.

On each system, cows were fed for a 2-month period. It took a total of 110 minutes of man time per day for 50 head of cattle on soilage and 129 for the same number on silage when figured on a per-day basis. When deciding which system is best, it's necessary to decide whether it is better to distribute your time evenly over the summer or concentrate much of it at silo-filling time.

Both systems resulted in equally good milk production and brought better returns from each acre of forage than did continuous grazing.

OUTLOOK...

Bigger wheat crop—price prospects down

It happened all of a sudden. U.S.D.A. shoved up its crop estimate, and lowered probable exports.

This year's crop will just about equal expected disappearance through next June. Previously, U.S.D.A. had figured it would be nearly 90 million bushels short of requirements. This pointed to a further reduction in carryover, and a stronger price position. All that is changed.

Note: *Your best bet now is the loan.*

And wheat exports will decline

Last year's big boost in wheat exports resulted largely from the poor 1956 crop in Europe. This year, with Europe's wheat in better condition, our exports likely will drop back to 350 million bushels. Last year's exports totaled 475 million.

So sell wheat this winter above loan

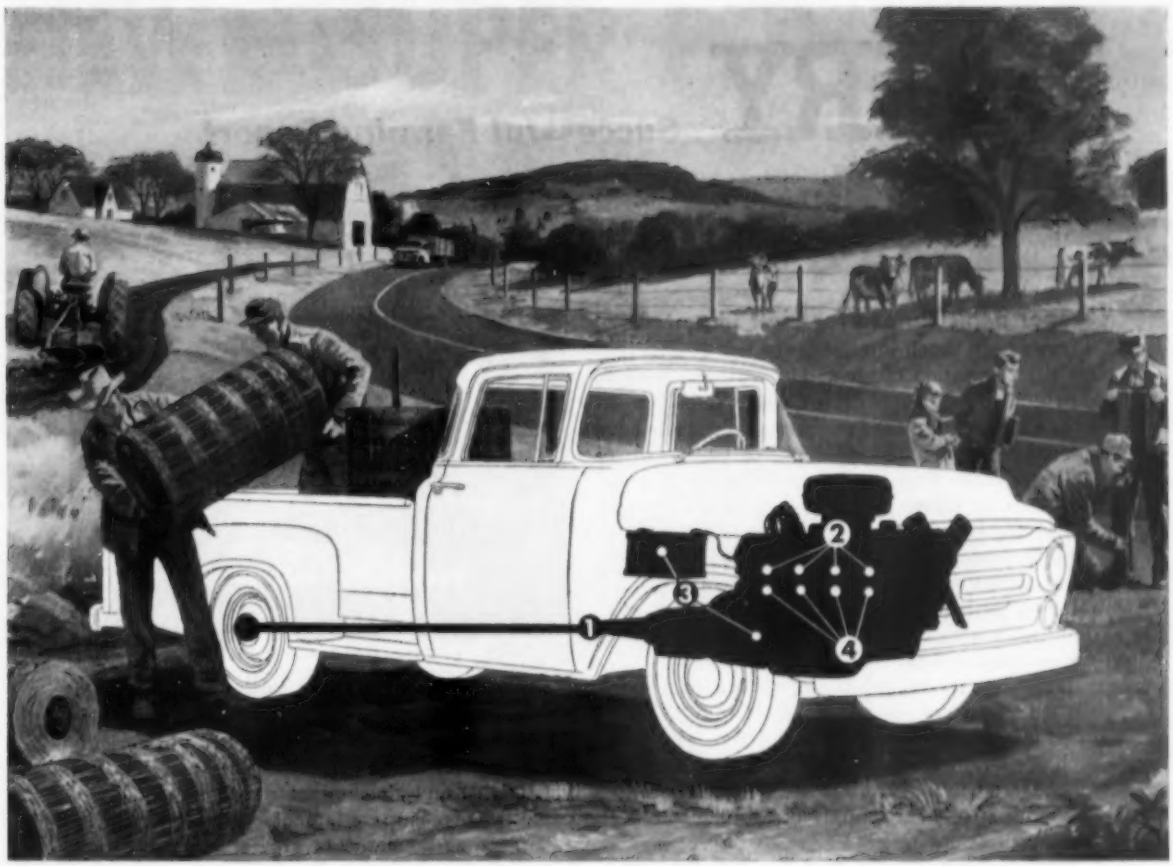
Don't get stuck with an overload of wheat next spring, when markets will reflect the reduced loan rates for 1958-crop grain. Watch prices closely, and get rid of wheat whenever markets are at or above loan levels. Otherwise, let C.C.C. keep the loan grain.

Bigger soybean crop now expected

Since rains held up working cornfields in major areas this spring, the shift primarily was to soybeans. This makes unofficial forecasts of a near 500-million bushel crop look more respectable. At the very least, the crop will be significantly above last year's record 456 million bushels.

More sorghum competition

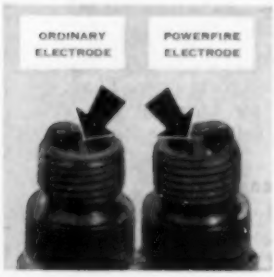
With the ending of the drouth in the Southwest, and the spread of sorghum production into the Midwest—a record crop is expected this year. This will both increase the feed-grain surplus and increase competition for other feed grains. This year's production brings sorghum into the major-crop class for the first time.



1. More Useful Horsepower:

To get the most horsepower from all your farm engines be sure to replace plugs that have gone 10,000 miles or more. Automotive tests proved that new Champions increase an engine's horsepower on the average of 24%!

How new Champion spark plugs improve engine performance 4 important ways

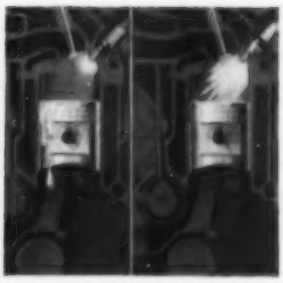


2. Greater Economy:

Ordinary electrodes soon burn away in modern engines, misfire, waste gas and power. Champion's Powerfire electrode lasts much longer, gives many more miles of peak efficiency.

3. Quicker Starting:

Car tests showed that when new Champions replaced plugs that had gone about 10,000 miles or so, starting averaged 39% faster. Exclusive 5-rib insulator reduces flashover, helps preserve battery.



4. Better Engine Protection:

When old plug misfires (left), raw gasoline drains into crankcase, dilutes engine oil. Full-firing new Champion (right) protects oil from harmful dilution, saves costly engine repairs.

Dependable 5-Rib

CHAMPION

SPARK PLUGS

CHAMPION SPARK PLUG COMPANY
TOLEDO 1, OHIO

DAIRY *Successful Farming Report*

WHAT'S NEW...

Proper penicillin use for bloat important

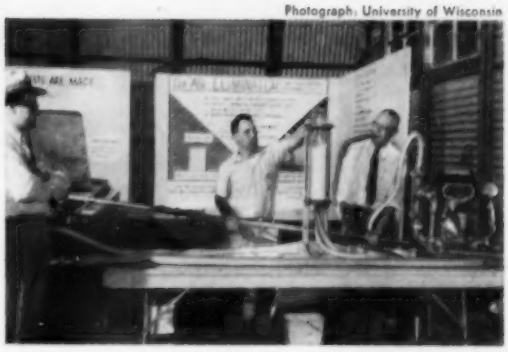
There's been much interest in the use of penicillin for the prevention of bloat. Dr. B. F. Barrentine, nutritionist, Mississippi State College, offers a word of caution. A number of commercial products have appeared on the market, some of which are of doubtful value. Penicillin is readily destroyed or inactivated by many agents and to be effective in preventing bloat, it must remain in active form.

Some penicillin-salt mixtures on the market contain complex trace minerals. It is known that trace minerals destroy penicillin activity, therefore, it is doubtful if such a product has any value in bloat preventions, says Barrentine.

He adds that a simple salt-penicillin mixture with a small amount of mineral oil added to the salt appears to be the most satisfactory mixture. However, such products lose penicillin activity when exposed to cattle licking, therefore, the recommendation that only 2- or 3-day supply of the penicillin-salt be put out at one time.

Penicillin added to a feed supplement is also effective in controlling bloat. In tests it remained stable through pelleting operations and for a period of 60 days at 6- to 8-percent moisture.

Photograph: University of Wisconsin



NOW—meter measures bulk-tank contents

Milk-metering equipment in photograph above is being studied by University of Wisconsin agricultural engineers. If proved successful, metering device (right) and air eliminator (center) would become part of pickup equipment for bulk-tank trucks.

Tests thus far indicate greater accuracy than conventional measuring methods. Advantages of the meter include more accurate measuring, mechanical recording of weights with handy reference slip for farmer. Meters would save time on pickups.

OUTLOOK...

Dairy income going up

Milk producers get a good break this year with pasture and hay crops the best in years. It means you will be saving money on expensive grain feeds while you increase production per cow. The more you take advantage of this blessing, the better you'll be able to hold costs down.

Milk prices to average higher

So far, farmer milk prices on the average have been some higher than a year ago—and are likely to continue that way. This is the third straight year of higher prices. The increases reflect higher prices for fluid and manufacturing milk, and the proportion of milk used as fluid.

If demand holds to present levels—and it seems sure to—the average farm price for all milk sold in 1957 will increase a few cents over the $4.13 per hundred received in 1956. Price of butterfat in past months has been above a year earlier. For the year as a whole it's likely to average a little above the 58.6 cents of last year.

Lower support price now is certain

There now is no doubt in official circles that price supports for manufacturing milk and butterfat will be reduced for the year beginning April 1, 1958. As further evidence, Secretary Benson is making new speeches laying the groundwork for a rather sharp reduction.

Butterfat is now supported at 80 percent of parity, or an average of 58½ cents a pound; manufacturing milk, 83 percent and $3.25 per hundred. Benson is expected to reduce support to near-75 percent of parity next year—roughly 56 cents for butterfat and $3.10 for manufacturing milk. That would be the lowest support for butterfat since 1955-56 and for manufacturing milk since 1950-51.

Milk flow lagging 1957 forecast?

Milk flow must increase greatly the remainder of this year, if production is to reach the 127.7 billion-pounds forecast for 1957 by U.S.D.A. January to May production showed only a nominal increase.

Since the country's total dairy herd is the smallest in 33 years of record, increased production must come from bigger yields per cow, which we're getting. Don't get the idea we're short of milk—we're just behind the forecast, maybe. Production in June was the highest on record, and C.C.C. has been buying more butter and cheese this year than last—but also getting rid of large quantities.

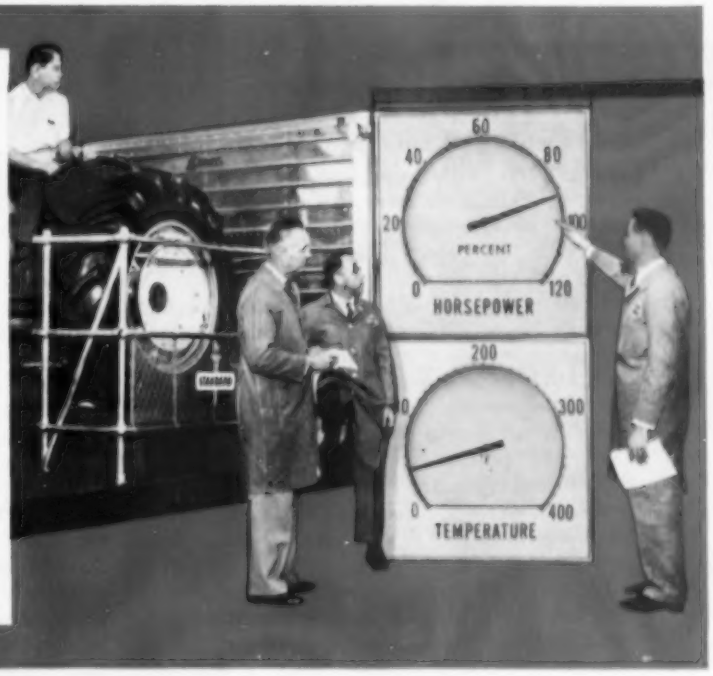
NEW HEAVY DUTY SUPER PERMALUBE

An all-weather motor oil with *outstanding heavy duty performance*—that's New Super PERMALUBE. It gives you important savings in *all* your equipment . . . cars, trucks *and* tractors including diesels!

New Super PERMALUBE was tested by tractor manufacturers in the laboratory and in the field—by farmers—by transport truck operators and bus lines—in hundreds of passenger cars, too. It outperformed all other motor oils tested, with big savings due to

- Less oil *and* fuel consumption
- Cleaner engines
- Outstanding reductions in wear, rusting and corrosion

Outstanding performance features of this new oil can be proved on testing equipment like the portable dynamometer pictured here.



SAVE ON OIL, FUEL AND REPAIR BILLS

Cleaner pistons with New Super PERMALUBE

Heavy deposits from Ordinary Motor Oils

It's a light oil when cold—you start fast and cut down wear in cold engines. When warm, *New* Super PERMALUBE is like a heavy-bodied oil . . . protects fully warmed-up engines—resists thinning and oil loss past piston rings and oil seals. You get *more miles* and *more acres* per quart. You save on fuel, too, because friction drag is greatly reduced.

New Super PERMALUBE reduces carbon deposits up to 50% to give you less knocking, less pre-ignition firing from combustion chamber deposits, and longer spark plug life. You get up to twice the ring life, with greater protection against rusting and corrosion. You get longer valve life, too, because stems and rotators are kept cleaner. *You save on repair bills!*

Buy Now and Save on Purchase Price, Too—15% or More!

Get the *motor oil* that saves you money, on the *deal* that saves you even more! You save *15% or more* on New Super PERMALUBE ordered now. Save, too, on other famous STANDARD Motor Oils, Greases and Anti-Freeze. *Call your Standard Oil Man right away!* You'll be glad you did.

You expect more from STANDARD and get it!

Quality Products • Friendly Service • Dependable Delivery

BEEF *Successful Farming Report*

WHAT'S NEW...

Tranquilizer-fed animals gain more

Tranquilizers, widely used for humans, are now being fed to livestock on an experimental basis. In tests thus far, steers and lambs gained weight faster, used their feed more efficiently, and graded out better when slaughtered.

In an 84-day trial with steers, terramycin resulted in an 11-percent improvement in gain and a 9-percent improvement in feed efficiency. Stilbestrol gave a 17-percent increase in rate of gain and a 13-percent improvement in feed efficiency. A combination of terramycin and stilbestrol resulted in a 23-percent boost in rate of gain and a 16-percent boost in feed efficiency. *When a tranquilizer was added* in these three cases, there was a further 12-percent improvement in rate of gain and a 7-percent improvement in feed efficiency.

It's also possible that tranquilizing drugs may be of some use in quieting animals immediately before slaughter, reducing the amount of dark cutting meat.

Implant or feed stilbestrol?

Stilbestrol implanted at the base of ears of steers resulted in slightly better gains than stilbestrol fed daily to steers in tests at Kansas State College.

Both groups of steers made excellent gains. Those fed 10 milligrams of stilbestrol daily, gained an average of 2.9 pounds each day for a 117-day fattening period. Those with 84 milligrams implanted at the base of the ear averaged 3.28-pound gain daily. The controls averaged 2.71-pound daily gain.

The steers weighed about 745 pounds each when the test started. Stilbestrol also increased the efficiency of the steers in turning feed to beef. It took 842 pounds of feed for each 100-pound gain on the controls, 735 pounds of feed for those fed the stilbestrol, and 756 pounds for those implanted with stilbestrol.

High-moisture corn—good feeding value

Purdue University animal husbandrymen report that high-moisture ground ear corn produced more economical gains than regular ground ear corn when fed to fattening heifers. Animals required 10 percent less of the high-moisture corn to produce a pound of gain.

For the feeding experiments the high-moisture ear corn was ensiled in an airtight silo and contained 32.5-percent moisture. Ensiling offers another method for preserving ear corn to retain its feeding value, says nutritionist W. M. Beeson.

OUTLOOK...

No big premiums for fed cattle

Last year at this time market supplies of fed cattle shortened up, and prices took off like a rocket. No such shortage of supplies is expected this year, and consequently no big premiums for fed cattle are expected.

There is *some* chance of bunched marketings in the next 60 to 90 days, but the market for Choice and Prime steers seldom goes bad at this time of the year.

Everyday beef is less plentiful

Some aspects of the market appear to be stronger now than they were a year ago. For example, the prospective supply of everyday beef is less plentiful than it was last year, and this tends to put a higher foundation under the entire market.

Then, too, there is a small increase in population (nearly 2 percent) and a larger increase in total consumer buying power (about 5 percent).

Late fall—early winter looks good

Remember 3 years ago? The cattle market was unusually strong during the late fall and early winter. Relatively heavy marketings of fed cattle during the next 90 days and restricted supplies of feeder cattle in recent weeks *again favor a strong market in the late fall and early winter*. So, if you can afford it, hold on and feed to heavier weights for that scarce quality-beef period.

Fall price trends will differ from last year when Choice peaked out at $27 at the end of September and dropped sharply to $22 in December. This year, the trend will be from June's $23.50 on up to around $28 in October and will remain steady through December.

Stockers and feeders—high

Prices of stocker and feeder cattle promise to be high again this fall. In fact, early as June, stockers were $3 a hundred pounds above same time last year. Calf crop also was smaller this spring, because of reduction in number of cows. *Profits* likely will come from the utilization of low-priced or unmarketable roughage rather than from a price advance, or margin.

- *If you want light calves* there are important advantages in buying them early. They can be moved before cold weather increases danger of "shipping fever." And they can make good gains on pasture for several weeks.
- *Prices of yearling cattle and 2-year-old cattle* usually decline moderately until sometime in October or November.

GREATER than the famous 2-ME

to pick your crop faster···cleaner than ever!

NEW McCORMICK 2-MH Corn Picker

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Now, mount this great, new corn-saver in 75% less time! New 3-unit mounting, with redesigned main frame, makes attaching far simpler and easier . . . gets you into the field faster than ever before!

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Many life-lubricated, sealed bearings cut daily get-ready time by 25%. With bank lubrication, you grease 40 "hard-to-reach" bearings from 12 easy-to-reach banks—to slash servicing time another 25%.

NEW 24-inch-high lift

You can raise gatherers and center divider instantly with Hydra-Touch® to pick at a *record 24-inch height!* You easily clear cover crops, or weeds . . . make sharper turns . . . cross gulleys with ease.

Get more of your crop . . . get it out faster . . . with the new McCormick 2-MH that even out-performs the great 2-ME! With new fast mounting, new easy servicing, new 24-inch lifting range—and many more new features—you save more corn, more time than ever before! Mounted on a Farmall® 350 or 450 (or 300 or 400) with or without Fast-Hitch . . . you can change speeds *on-the-go* with Torque Amplifier . . . avoid slugs with *completely* independent pto. Here's *unmatched* performance to out-pick, out-save them all!

PLUS these features—and more!

- **NEW . . . choice of 3** types of snapping, 2 types of husking rolls to match ear and stalk conditions.
- **NEW on-the-go snapping roll adjustment** to match variations in your crop.
- **NEW higher center divider** and streamlined shielding saves more corn from leaning stalks.
- **NEW ladder and deck** add safety and convenience.
- **NEW telescoping hitch** centers wagon under elevator.

Choose from 5 McCormick pickers! Mounted 1-row, 2-row (heavy or regular-duty). Pull-type: Heavy-duty 1-row or 2-row. Get the picker that exactly fits your acreage, your power . . . at your IH dealer's.

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BRAND OF OXYTETRACYCLINE

PIG STARTERS

and milk replacers

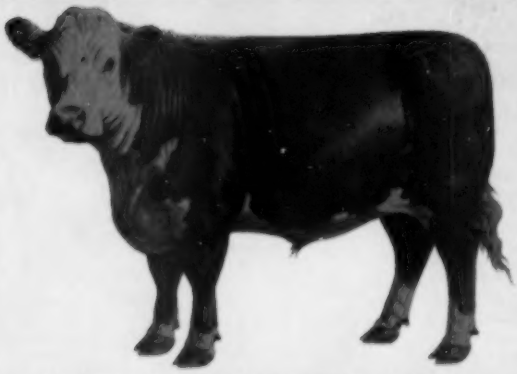
Make possible much faster early gains, earlier weaning. Terramycin in pig starters reduces scouring, you have fewer runts and tailenders, get pigs that average 10 lbs. heavier at 8 weeks.

When followed by growing feeds or supplements containing Terramycin, pigs have reached 220 lbs. three weeks sooner with a savings of 96 lbs. of feed per head.

EXTRA-PRODUCTION LAYING FEEDS

New way to get more eggs

A specially blended feed containing Terramycin to bring pullets into full production earlier —at a higher rate. Maintains a higher rate of production throughout the laying cycle, even when birds are under stress. Terramycin is helping *more* farmers get *more* eggs than any other antibiotic.



5-DAY CONDITIONING FEEDS FOR BEEF

Feed for the first five days after arrival. The most practical, low-cost method ever developed for preventing and treating shipping fever in its early stages. Keep a stand-by supply on hand to prevent trouble after any stress or cold or fever symptoms throughout the feeding period.

For faster gains on less feed and *reduction in the incidence of bloat* use a regular supplement containing Terramycin.

HIGH LEVEL FEEDS

For prevention and treatment of many diseases

At high levels, in special disease-fighting feeds, to be used at times of stress or actual outbreaks, Terramycin is recommended in these conditions:

CHICKENS, TURKEYS: Blue Comb (Mud Fever, Non-Specific Enteritis, Pullet Disease, Summer Disease), Chronic Respiratory Disease (Air-Sac colds), Hexamitiasis, Synovitis. For starting all chicks and poults, during any laying slump.

PIGS, HOGS: Bacterial Diarrheas (Scours), Atrophic Rhinitis, Leptospirosis.

CALVES, CATTLE: Bacterial Diarrheas (Scours), Shipping Fever complex (also called stress fever or feedlot fever). For reducing the incidence and severity of bloat.

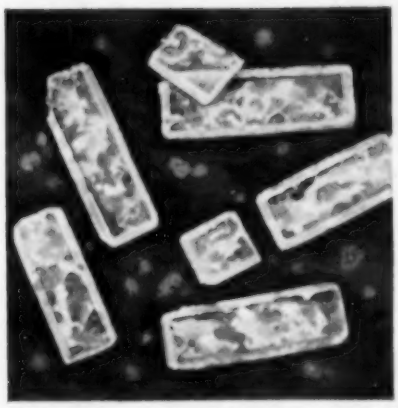
LAMBS: Bacterial Diarrheas (Scours), Enterotoxemia.

in feeds

The list of feeder-proved benefits brought to you by this unusual antibiotic gets bigger, longer, stronger every year

Some of them are so outstanding they have helped to make possible the new kinds of feed listed here

These special feeds offer new ways to increase production and profits, better solutions to some of your biggest problems



Golden yellow crystals of Terramycin, magnified 1,000 times. This antibiotic has become the most valuable substance in animal agriculture.

In the soil of a Midwest cornfield, less than ten years ago, scientists discovered one of the greatest forces for life, growth and health the world has ever known.

They named this new substance after the soil itself—using the Latin word for earth; "*terra*".

MEDICAL MILESTONE

*Terra*mycin has since become a household word. Its importance in medicine was quickly recognized. Where penicillin combated some twenty-five diseases and streptomycin fifteen, Terramycin was found to be effective against almost 100—and was remarkably free from harmful or undesirable side effects.

Terramycin has been the most thoroughly researched and tested antibiotic used in the field of animal health and nutrition. Discovery has followed discovery and the list of *known* benefits continues to grow!

FIRST CHOICE OF FARMERS

Today more farmers name it their first choice—over all other antibiotics—as the best all-around antibiotic for all their poultry and livestock. With good reason. Terramycin promotes faster, more economical gains for swine, dairy calves, beef cattle, lambs, chickens, turkeys, without worry about your animals getting "too much" Terramycin.

In fact, scientists found that adding *more* Terramycin to the daily ration could multiply the benefits when included in properly balanced and blended special-purpose feeds. Pfizer cooperated with the feed industry in introducing these feeds.

The first was pig starters, which made possible the earlier weaning of pigs, the control of scours and a more efficient and profitable way of producing pork.

FEED AWAY DISEASE

Next came special high level feeds for the prevention and treatment of many common and costly diseases. Here again Terramycin was found to have many advantages. Not only does it provide positive protection against a much wider range of harmful bacteria, *these bacteria have never been able to build a defense against Terramycin!* Terramycin also promotes appetite, helps to maintain weight and condition while you treat birds or animals that are sick or under stress.

INCREASE PRODUCTION

Two entirely new kinds of feed are now bringing poultrymen and beef feeders some of the biggest and most dramatic benefits of antibiotics to date.

Owners of laying flocks can now get an *extra-production laying feed* containing a scientifically determined balance of Terramycin and other ingredients that promote a higher level of egg production throughout the laying cycle.

PREVENT SHIPPING FEVER, BLOAT

Beef feeders can now get a five-day conditioning feed for cattle. This feed contains the levels of Terramycin needed for effective prevention of Shipping Fever. Used on arrival it provides fast, yet economical control for Shipping Fever complex in its early stages—before the damage is done. It is also formulated for high appetite appeal for calves. Helps you get them started on regular feed much faster.

In regular supplements for beef, Terramycin at nutritional levels promotes an average 8% more gain on 8% less total ration. It is the only antibiotic approved for use in feed for reduction of the incidence and severity of bloat!

When you get one of these special-purpose feeds containing Terramycin you can be sure you are getting *all* the benefits, *all* the protection that can be provided by antibiotic feeding.

You can also be sure that the antibiotic is *evenly* and *accurately* blended throughout the feed, so every bird or animal gets the amount it needs—in every mouthful.

Pfizer

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Straight out of tomorrow comes this new prestige pick-up. It's the brilliant Dodge Sweptside 100 . . . the most exciting new pick-up of them all. You get a truck-sized 1675-lb. payload capacity, gleaming chrome bumpers and smart two-tone paint as standard equipment. Famous push-button LoadFlite automatic transmission, power steering, power brakes and the flashing 204-hp. V-8 engine are all available. Equipped any way you like it, the Sweptside 100 is priced surprisingly low. Better see it and drive it soon.

exciting new Dodge pick-up

HOGS *Successful Farming Report*

WHAT'S NEW...

"Broiler-type" swine production

A broiler-type swine production program might be a future trend. Marketing pigs at lighter, meatier weights may be one way to better adapt hog production to consumer needs and preferences, thinks Steve Zobriski, Missouri College of Agriculture livestock specialist. He points out that two 150-pound butchers actually produce about one-fifth more edible meat than one 300-pound hog. Four 150-pound shoats yield nearly 24 pounds more lean meat than three 200 pounders.

Bulky feeds can improve carcass

Feeding more bulk to finishing pigs in a University of Illinois test improved carcass quality. The bulky rations tended to increase carcass length and percentage of lean cuts and decreased average back-fat thickness. Bulky feeds, however, slowed gains and made the gain more expensive.

The economy of changing feeding methods to improve carcass quality will depend on seasonal prices, premiums for quality carcasses, labor supply, and cost differences.

Farrow in November or December

The hog-corn price ratio has been unusually favorable to hog producers for several months. This is stimulating an increase in swine production (see Outlook below).

The big load of pork, however, won't get to market until the fall of 1958. You can beat the crowd to market by having your sows farrow in November or December. Farrowings at this time will give you several advantages:

1. The weather at farrowing time is not likely to be severe.
2. You can use low-cost, new-crop corn all the way.
3. You will have more leeway in marketing since sales can be made at anywhere from 180 to 240 pounds without much risk of large price discounts.
4. You'll have a good chance to sell on the highest market of the year.

Watch swine feeding costs

Feed accounts for about 75 percent of total costs in swine production, say swine specialists at Purdue University. A few cents' saving in feed costs can be a big over-all saving. They stress the importance of feeding recommended levels of protein to pigs at various ages. When pigs reach 75-100 pounds, the total protein can be cut down to 12 percent on pasture and 14 percent in dry lot.

Cool hogs with water sprays

A fine-mist water spray will keep pigs comfortable and gaining on the hottest days in summer, say Purdue University extension swine specialists.

They suggest installing a shower or sprinkler as an effective way of doing it. Pigs should be able to move in and out as they want. A pin-point nozzle using as little as 2½ gallons of water per hour will supply a fine mist sufficient to keep a pen of 6 to 10 pigs comfortable all day without crowding.

OUTLOOK...

Special report on 1958 prospects

The very conscious effort on the part of growers to hold to moderate pig crop increases *may* prevent a boom and bust cycle in the next 18 months. The June 21 pig crop report shows that farmers are trying hard to keep the crop more in line with demand—possibly remembering the 1955 bust.

The big question is this: How long will hog raisers stick to moderation? There'll be temptation to make a big boost next spring. With a smaller-than-expected fall crop going to market next winter, prices will be high.

Boom and bust?

If the 1958 spring crop gets out of hand—more than 6 percent higher—the odds definitely favor a big bust in the fall of 1958. But on the other hand, if hog raisers make only a moderate increase next spring, a 1958 bust can be avoided.

That's the word from Harold Breimyer, the U.S.D.A.'s top livestock economist. Breimyer says the 2-percent fall pig crop increase indicated by the June report is good in one respect, bad in another. He says: "The moderate increase indicated shows farmers are making a genuine effort to keep production under control. But the more favorable prices expected as a result next winter may encourage farmers to make a bigger expansion later."

May see cheap hogs by late 1958

Next fall's crop may be up 4 percent rather than 2 percent—because U.S.D.A. has consistently underestimated the number of pigs saved *per litter*.

By next spring, the increase *may* be 10 percent higher than 1957. By late next summer the bigger early spring pig crop will make itself felt and depending upon how much of an increase, prices could be \$3-\$4 below present levels.

Outlook for weeks just ahead: Page 92.

Modern farms need modern water systems

These days, smart folks know that a *good* water system is a "must" on every farm. That's why they insist on Aermotor Pumps.

They know Aermotor Pumps supply plenty of water at "city-plus" pressures—winter and summer—in the house—out in the yard. And they know Aermotor Pumps have reserve capacity to handle all the modern water-using appliances too! Make your farm a modern one! Insist on an Aermotor Pump for your water system.

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It's by far the *coolest*, most convenient sanitary protection you could wear! No chafing pads. No twisting belts. No embarrassing odor. No messy disposal problems. And when it comes to carrying extras, *nothing* could be more convenient. A whole month's supply can tuck away in your purse!

Do try Tampax. Ask for it wherever drug products are sold. Regular, Super, Junior absorbencies. Tampax Incorporated, Palmer, Massachusetts.

POULTRY *Successful Farming Report*

WHAT'S NEW...

A look into the crystal ball

A panel of poultrymen and university scientists at the University of California Poultry Institute tried to guess what might be the future trend in poultry housing.

Here's their idea: In 1977 chicken houses will be multistoried and without windows. Not only the inside temperature and humidity conditions will be controlled as needed, but the sequence of night and day will be determined by setting a control panel. Another innovation may be filtered air.

Keep chickens cool

Chickens have no sweat glands, and need help to keep cool whenever the temperature rises above 80 degrees, reports Purdue University poultry specialist. Temperatures over 80 degrees mean decreasing egg production, egg size, and rate of growth. At 100 degrees, heat prostration is not unusual if the chickens are not given help in keeping cool.

Plenty of cool drinking water helps—drinking space should be at least doubled in hot weather. Waterers on range should be shaded, and handy to feeders.

Other methods for keeping chickens cool include: painting the roof white, sprinkling water on the roof, extra ventilation, use of fans, insulation, and shade.

Urea—possible use for poultry

Urea or ammonium citrate—nonprotein forms of nitrogen—may someday find a place in poultry feeding and bring lower feed costs. Recent research by T. W. Sullivan and H. R. Bird, University of Wisconsin poultry nutrition researchers, shows that chicks can use urea or ammonium compounds—provided there's a feed in the diet to which the nitrogen released from the chemical compounds can be attached.

Right now, it wouldn't be practical to add urea in poultry rations because protein supplements now used supply enough extra nitrogen that urea isn't needed.

Cheaper laying rations?

There's a good possibility amounts of high-cost protein can be decreased in rations for laying hens, report University of Wisconsin poultry researchers. A level of 15-percent protein in laying mashes has formerly been recommended, and many mashes contain 17 percent—recent work indicates 12-percent protein is O.K. under some conditions.

In experiments, Leghorn pullets in laying batteries fed 12-percent protein mashes did as well as those on higher protein mashes.

Protein levels of 10 and 11 percent were too low for egg production and weight maintenance. The 12-percent level may be too low for young pullets laying and growing at the same time.

Stronger eggshells

Recent research work indicates that adding antibiotics and unidentified growth factors to poultry rations increases eggshell strength. The use of antibiotics in the feed or drinking water of laying flocks also increased egg production of the treated birds significantly.

OUTLOOK...

Egg prices to move steadily higher

Now that the long-awaited higher egg-price trend has set in for sure, you can expect prices to peak late this fall—in November and December.

Prices at that time will be the highest in 2 years. We look for average prices for all eggs to hit close to 50 cents a dozen—including hatching, farmer retail, and wholesale prices. Last time they went that high was in December 1955. Average price for Midwest farmer sales will be 40 cents or more for Grade A Large—up from 22 cents this spring. Prices will go up steadily to that peak.

Another bright spot: Discounts for medium and small eggs won't be as sharp as last year, because there will be fewer pullets laying eggs in the fall.

Broiler prices better than spring

While this will continue for about a month more—they'll sink again this fall.

Marketing agreements for broilers?

Many producers are toying with this idea. Agreements would be patterned after those in use for citrus, potatoes, and other fruits and vegetables.

Principal effect would be direct at controlling production by restricting marketings. Difficulty in developing marketing programs is that the broiler industry has become so widespread, with so many competing areas of production.

Many turkeys in storage

Trouble with the turkey market is the big supply of birds left over from last year. New production is not as big as had been expected. Prices would be pretty good were it not for the overhang of storage stuff.

Merchants will be pushing sales of frozen turkeys all summer. Success will spell the difference between profit and loss on your young birds.

New State Farm Auto Policy for families who depend on cars

Protects more family members against more perils... pays higher benefits... rural drivers get it at extra-low rates!

NOW . . . State Farm *does something* about the financial risks that take some of the joy out of today's driving. This new policy* is the most complete, most comforting protection we've ever offered—44 features in all. It's especially valuable for families who depend on cars for all their transportation needs . . . families who go places together . . . families where more than one person drives.

Only State Farm offers this broader protection backed by "hometown service wherever you drive." On every highway and byway in the U.S., you see the famous State Farm roadside signs. They direct you to the more than 9,000 local State Farm agents and claim expediters who are always on call to assist you . . . day or night . . . whether it's a dented fender or a serious accident.

Present State Farm members get this extra protection added to their policies *automatically. You* can get it from your State Farm agent. He's probably listed in the Yellow Pages. Call him now!

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for year-'round shooting

Stevens 58-ac

bolt action repeating shotgun $35.95 up

Here's a rugged, dependable, all-round performer for pest control on the farm . . . upland game or waterfowl shooting. Also an accurate deer gun with rifled slugs or buckshot. Has Savage Adjustable Choke for instant choke selection—finger-twist "dialing" of any choke setting from full through cylinder.

Other features include three phase trigger-sear-hammer firing mechanism for clean, crisp trigger pull . . . positive safety . . . 2-shot detachable clip magazine . . . black tipped walnut stock. In 12, 16 and 20 gauge. 26" barrel.

Stevens Model 58—Same as Model 58-AC but without Savage Adjustable Choke. Full choke. 12, 16 and 20 gauge. $31.95 up.

Stevens Model 59—.410 gauge, bolt action, 6-shot tubular magazine. Full choke. $35.95.

Model 58—.410 gauge, similar but with walnut finished stock and 3-shot clip magazine. 26" barrel. $30.95.

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SAVAGE • STEVENS • FOX FIREARMS

ALL PRICES SUBJECT TO CHANGE

The farmer's WASHINGTON®

- "Freer" market means wider fluctuation in prices
- Will tighten up on acreage reserve program rules
- A crackdown on using penicillin to control mastitis

Farm prices outlook. The administration has given up trying to boost farm commodity prices, if, indeed, it ever entertained such an idea. Make no mistake about this. While the men now running farm programs have the power to strengthen prices through supports, their actions and recent words clearly indicate they don't intend to do it.

What it means to farmers is that you will increasingly be subject to the fluctuations of the open market. Economists opposed to the Benson policy say: *Agriculture will experience wide fluctuations of supply and demand prevalent before current programs went into effect in the 1930s.*

Acreage reserve control. More stringent controls are coming for farmers participating in the acreage reserve of the soil bank in 1958.

Secretary Benson is readying final details of a base acreage plan for farmers going into the acreage reserve. The secretary says aim of the program is to "prevent shifting acres into soil-depleting crops." This year some farmers put land in the corn acreage reserve, for instance, then shifted other acres into crops.

Here, generally, is how the base acreage plan would work: You would be given a number which would represent the total acres you've had in such soil-depleting crops as feed grains and soybeans during, say, the past 3 years. If you want to put corn in the acreage reserve and receive payment, you would have to reduce your acreage of soil-depleting crops.

Feed grains problem. Biggest new problem now shaping up is what to do about feed grains. Present crop prospects point to pretty big headaches for both the Department of Agriculture and for farmers.

Early indications are that we may be swamped with a tremendous output of total feed-grain crops, in addition to another huge soybean harvest. Trade sources believe corn production may approach last year's crop of 3.5 billion bushels, second largest on record. Oats and barley production is expected to be up. Huge grain-sorghum output is likely to be the sensation of the year. If total production is anywhere near expectations, it means much cheaper feed next year—a big spur to hog, poultry, and fed cattle output.

What to do about it is plaguing U.S.D.A. planners. They've come up with some suggestions for Congress to chew over. Among six alternatives worked out, Secretary Benson favors putting corn support on the same basis with other feed grains. That is, removing the 75-percent-of-parity corn support floor and reducing props for all grains to the point where overproduction will be discouraged considerably.

The other five alternatives are these: Continue the present programs for corn and other feed grains, put all feed grains into the acreage reserve, put all feed grains under allotment, adopt a 2-price or domestic allotment program for all feed grains, or withdraw all price supports and production controls.

Farm Bureau plan. An alternative to the present corn program has been proposed by American Farm Bureau Federation leaders for a 1-year trial.

They call for a referendum late in December, 1957, in which farmers would vote their choice of the present program or the alternative program, which would:

- Set supports for the 1958 crop at 70 percent of parity with no allotments.
- Set supports for other feed grains according to their relative feeding value to corn and corn support rate.
- Let producers of corn and other feed grains take part in the acreage reserve program on a voluntary basis.

The silver lining: Because corn parity is moving higher this summer, the chances are U.S.D.A. will have to raise the commercial area corn support from $1.36 to $1.37 a bushel. Also, following the July crop report, U.S.D.A. is preparing to offer support to corn growers who don't stay within allotments, as it did last year.

Cost of money going up. If you borrow money, you are in for a jolt one of these days. President Eisenhower has asked Congress for authority to increase interest rates across the board on government-sponsored loans. If authorized, it would mean higher interest rates on such things as farm home loans, irrigation and reclamation loans, conservation loans, R.E.A. and veterans housing loans—another boost to the high cost of farming.

The president asked that the govern-

[*Turn to page 28*

Cowman Joe Tucker, on his quarter horse, tells district telephone manager Dick Hildebrand how his telephone helps him contact buyers, make shipping arrangements. It also helps ranchers to work out protection against prairie fires.

The telephone put this rancher back in the saddle

Joe Tucker, Jr., who runs 600 Herefords, once used his car as much as his cow pony on his 6000-acre ranch near Bowring, Okla. That was before a telephone was installed.

"I wore out many a car just driving to town to use the telephone," he explains. "Now I can talk to buyers in Iowa, New York and Texas, as well as folks in town, without losing any working time."

It was Dick Hildebrand, district telephone manager in Bartlesville, who helped rancher Tucker and his neighbors get service. He is typical of the many thousands of men and women of the Bell System, who work hard to bring service to rural areas.

"Twenty years ago," he recalls, "we didn't have any telephones out in this country. Today, by using new kinds of cable that serve more people and by plowing the cable into the ground, we aim to give everybody better and better service."

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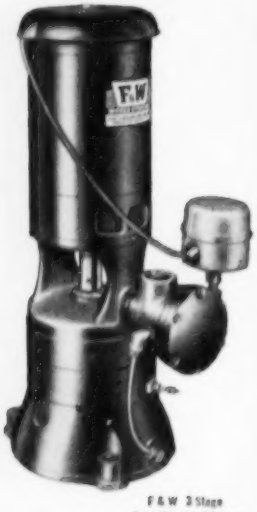

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When you install an F & W "Big 6" Water System, you can pump from greater depths in smaller wells. For example, you can go to 200 feet in a 3-inch well, or 150 feet in a 2-inch well, and pump efficiently and adequately. This means more water at lower cost. Performance, long-life, low cost operation and dependability are assured by F & W's big six advantages: exclusive 4-volute design, matched engineering, precision manufacture, high pressure injector, patented automatic control valve, and exclusive "speedichange" rotary seal. For full details see your F & W dealer or write for Folder No. 501.

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Sell hogs now . . . or put on a few more pounds?

That question probably goes through your mind every time you sell hogs. In deciding, you have to consider:

1. What your hogs are worth now.
2. What they will be worth after you add the extra weight.
3. What it will cost to put on the added pounds.

Below are three charts to take the work out of figuring the price you'll need to break even after adding another 25 pounds to 200-pound, 225-pound, or to 250-pound hogs.

The charts recognize that it takes more feed to put on an additional pound of gain as a hog becomes heavier. Costs of gain are based on tests at Midwest agricultural experiment stations with hogs fed a balanced ration of corn and protein supplement in dry lot. Other costs are included, too. Cost figures assume a reasonably high degree of feed efficiency—but good farmers using legume pasture and antibiotics can do even better.

Note in the charts that you come out with your *break-even price* after adding the extra weight. To make it pay you should get a better price than that.

To help you estimate the trend of hog market prices from here on, read "How to Outguess the Hog Market This Summer," on page 92.

You'll note that good prices may not wait on you—the price may slip down while you're putting on extra pounds, taking away the advantage of the extra weight. At other times of the year, you can more safely add weight, and expect the price to rise while you're getting more pounds ready to sell.

HOW CHARTS WORK . . .

Example is shown in 200-pound chart in color. If hogs are now worth $17.50 and corn $1.25, break-even price is $16.98.

If your hogs now weigh 200 pounds

and are worth, per hundred		and your corn is worth		
		$1.00	$1.25	$1.50
$12.50	after you add 25 pounds your break-even price is:	$12.25	12.54	12.82
15.00		14.47	14.76	15.04
17.50		16.67	16.98	17.27
20.00		18.92	19.20	19.49

If your hogs now weigh 225 pounds

and are worth, per hundred		and your corn is worth		
		$1.00	$1.25	$1.50
$12.50	after you add 25 pounds your break-even price is:	$12.32	12.57	12.84
15.00		14.56	14.82	15.09
17.50		16.82	17.07	17.34
20.00		19.06	19.32	19.59

If your hogs now weigh 250 pounds

and are worth, per hundred		and your corn is worth		
		$1.00	$1.25	$1.50
$12.50	after you add 25 pounds your break-even price is:	$12.37	12.63	12.88
15.00		14.64	14.90	15.15
17.50		16.92	17.17	17.42
20.00		19.19	19.44	19.69

TOP TRUCK TIRE IN ITS CLASS because it's built with *Triple-Tough* 3-T Cord!

New RIB HI-MILER Simply can't be matched at $19.95

for size 6.00-16, 6-ply rating, plus tax and recappable tire – no more than you'd pay for some auto tires! Other sizes also attractively low-priced – including TUBELESS in 15" and 16" sizes. Prices subject to change.

CONVENIENT BUDGET TERMS! Pay as little as $2 weekly for a *pair* of these truck tires, at most Goodyear dealers'.

Triple-Tempered by Goodyear's exclusive process precisely controlling "Tension, Temperature and Time"

Deep skid-resistant tread

Rugged shoulders, built to take it

Broader tread – more rubber grips road

Same Basic Design used by big fleets to cut costs

From first to last – it proves itself!

With this through-and-through TRUCK tire, your first low cost buys you *outstanding* performance.

Outstanding because 3-T Cord takes HEAT as no UNtempered cord can possibly do.

Outstanding because 3-T Cord takes the SHOCK of bumps that ruin lesser tires.

Outstanding because 3-T Cord wards off the FATIGUE of hard wear – keeps RIB HI-MILER rolling thousands of miles after other tires at the price are worn out!

TRIPLE-TOUGH 3-T CORD – and the secret triple-tempering process that makes it – are Goodyear exclusives. *No other make tire AT ANY PRICE has them.* That's a big reason why the RIB HI-MILER gives the most outstanding performance in its price class – simply is not matched for the money! At any Goodyear dealer's – and ONLY Goodyear dealers'! Goodyear, Truck Tire Dept., Akron 16, Ohio.

GOODYEAR TIRES

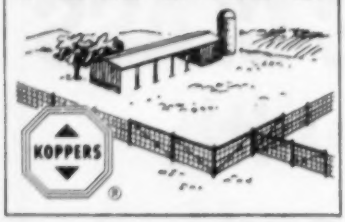
Look for this nearby Goodyear dealer sign for better tire values – better tire care. Convenient credit terms.

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

Hi-Miler–T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

FOR BETTER FENCING



KOPPERS 30 YEAR POSTS

- PRESSURE-CRESOTED
- LOWER COST PER YEAR
- LONG LASTING

Send for "Better Fencing" Booklet...

Write: Wood Preserving Division F-7
Koppers Company, Inc.
1468 Koppers Bldg., Pittsburgh 19, Pa.

KOPPERS POSTS

IDEAL FOR CLUB MEETINGS

"Make Yours a Well-dressed Home," a colorful 35 mm filmstrip presents basic principles in home decorating. Order from *Successful Farming*, Des Moines 3, Iowa. Complete kit only $9.50.

Corn Pain Stops

You'll enjoy quick *nerve-deep* relief and speedily remove aching corns with soothing Dr. Scholl's!

Dr Scholls Zino-pads

MOTHERS FRIEND

The SKIN CONDITIONER for EXPECTANT MOTHERS

The soothing, refreshing skin conditioner that penetrates and brings relief to numbing, tingling muscles in back and legs . . . ends the discomfort of tight, dry skin.

COMMENDED BY PARENTS

At Drug Stores Everywhere.

THE S.S.S. COMPANY, ATLANTA, GA.

What's new in homemaking®

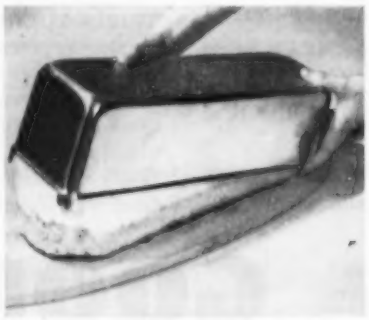
Portable can opener, designed to be used with 1 hand. Vacuum base holds it secure to table. At stores, $8.95.—*Rival Manufacturing Co., 22nd and McGee Trafficway, Kansas City 8, Mo.*

Food mixer, drink blender. Use mixer as either portable or with stand. Blender fits into either beater holder for malts, shakes. At stores, $27.95.—*Westinghouse Electric Corp., Mansfield, Ohio.*

Household scale, weight capacity of 2 ounces to 50 pounds. Use for roasts, freezing, laundry, checking purchases. At hardware stores, $6.95.—*Borg-Erickson Corp., 1133 N. Kilbourn, Chicago, Ill.*

"Silicone Parchment," a stick-free lining sheet for baking pans, casseroles, cooky sheets; 25 feet packaged in self-tearing carton. At paper counters, 75 cents. —*The KVP Co., Kalamazoo, Mich.*

Photographs: Stanley



Loaf angel-cake pan with cooling lugs. Use 13-egg recipe or your favorite mix. Ideal for meat loaf, congealed salads. At stores, $2.98.—*Aluminum Cooking Utensil Co., New Kensington, Pa.*

Standard typewriter being distributed through portable retail dealers. Price is comparable to portable but with standard keyboard. Price $179.50.—*Smith Corona, Inc., Syracuse, N.Y.*

New fun with cupcakes!

from Betty Crocker

"Gay tricks! Easy tricks! Win-yourself-a-kiss tricks! There's no end to the fun you can have with light 'n lovely cupcakes made with Betty Crocker Cake Mixes! Easy cupcake directions are right on the package. (Takes about 15 minutes to bake 24!) Then add your own decorative touches. Or start with a brand-new idea —fresh fruit to make luscious little upside-down cakes! Here are just a few ideas. You'll think of many more, I know!"

Merry-Go-Round Cakes

Use Betty Crocker White Cake Mix. Frost cupcakes with Chocolate Fudge Frosting. Trim with animal crackers.

Snowballs

Betty Crocker Yellow Cake Mix makes these. Frost with Betty Crocker Fluffy White Frosting. Roll in coconut.

Peach Surprise

Use Honey Spice Cake Mix, first placing in 14 custard cups, ½ tsp. butter, 1 tsp. brown sugar, 1 peach half.

Cake Cones

Use Devils Food Cake Mix, filling flat-bottomed cones a scant ½ full. Trim with Fluffy White Frosting and candy.

Trix Cakes

Use any Betty Crocker Cake Mix. Frost cupcakes with Fluffy White Frosting. Dip in Trix—the gay colored cereal.

Kissin' Cakes

Use Peanut Delight Cake Mix and Instant Peanut Creme Frosting Mix. Make candy nose and eyes, a cherry mouth.

"I guarantee a perfect* cake—cake... after cake... after cake!"

*PERFECT! Yes, every mix we make for you is guaranteed to come out perfect, or send the box top to Betty Crocker, Box 200, Minneapolis, Minn., and General Mills will send your money back.

Betty Crocker General Mills

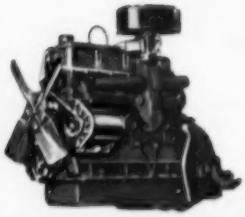
NEW F-600 HUSKY FARM WORK HORSE
Ford's popular 2-tonner now offered with a choice of five wheelbases for bodies up to 19 feet. GVW up to 19,500 pounds. Choice of three Short Stroke engines, up to 181 hp!

NEW FORD PICKUP WITH STYLESIDE BODY
America's biggest ½-ton pickup body—standard at no extra cost! It's as handy as it's handsome: a double-duty beauty that works the whole day round . . . that's really a pleasure to drive to town!

Here's why America's most modern

Largest Loadspace—Styleside bodies give more loadspace than any pickup, standard at no extra cost! 6½- or 8-ft. lengths available!

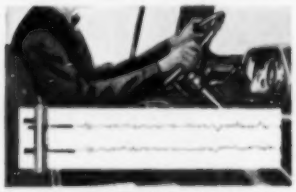
New Cab Comfort—All-new Driverized cab with new visibility, new Hi-Dri ventilation, new inboard cab step, modern suspended pedals!



New Power Advances—Higher compression, freer breathing, stronger camshafts! Only Ford offers a Short Stroke Six as well as V-8!

Greater Body Strength—Welded all-steel construction! Husky "wrap-around" rear corners with box-section corner reinforcements!

Longer Engine Life—Super Filter air cleaner stops 90% of abrasive dirt that conventional cleaners miss! Reusable filter is easy to clean!



New Smoother Ride—Ride tests show that Ford's new suspension gives a ride that's mighty close to that of a passenger car!

farm trucks COST YOU LESS

Whatever your acreage, whatever you grow, you're way ahead with modern Ford Farm Trucks. Ahead because they give you more and *do* more . . . ahead because they cost you less!

Ford's new half-ton pickup with Styleside body is a good example. The sides of the body extend to the sides of the cab, providing 23% more load-space than any 6½- or 7-footers—and the Styleside is standard at no extra cost! There's a roomier, all-new Driverized cab for greater comfort, plus a new suspension that gives you a ride mighty close to that of a passenger car! Engine advances, too!

And even with all these "extras," Ford Trucks actually *cost less*. First cost is low. Modern Short Stroke engines are designed for low running cost. Resale value is traditionally high. And an independent study of over 10 million trucks proves Ford Trucks last longer!

On every job around the farm, in the field or on the highway, modern Ford Trucks do more . . . to cost you less! Call your local Ford Dealer for a demonstration ride!

THE BIG FLEETS BUY MORE FORD TRUCKS THAN ANY OTHER MAKE

FORD TRUCKS COST LESS

. . . LESS TO OWN . . . LESS TO RUN . . . LAST LONGER, TOO!

6 hours and 15 acres later

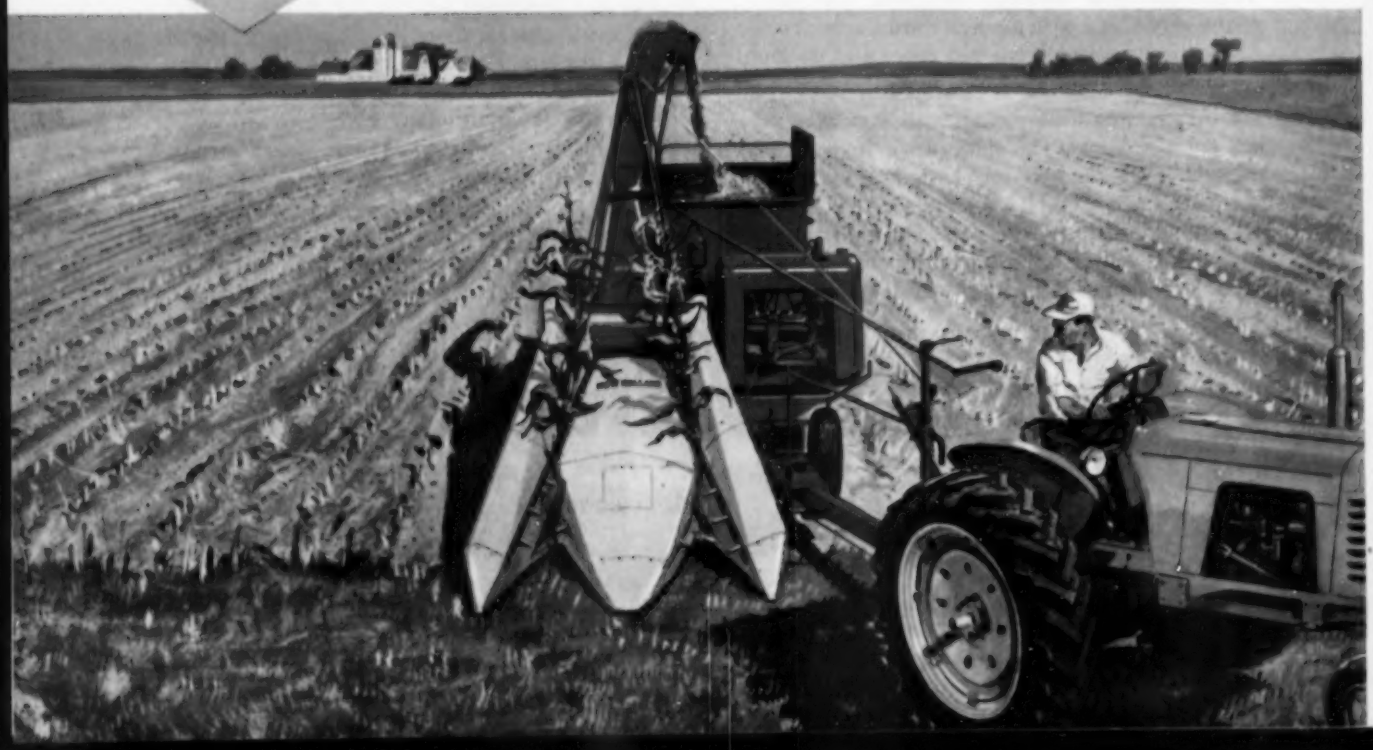
THAT'S a big day's work in any farmer's book! It's more, perhaps, than you're ever likely to set for yourself. Yet, it's easy for New Holland's mighty "800"—the world's fastest forage harvester. Even if you're putting up 10 tons of silage to the acre, your "800" chops at barely half its 45-tons-per-hour capacity!

This tremendous capacity also means the "800" has plenty of power and stamina for the toughest jobs. It will chew through wind-flattened corn or a tangled growth of broadcast sorghum and sudan grass—*and keep right on going.* With the great New Holland "800", you'll get your chopping jobs done fast and without trouble. And that means—you'll save money!

Wide choice of attachments: 1- or 2-row corn heads, 6- or 8-foot direct cut and 6-foot windrow. See your dealer today! New Holland Machine Company Division of Sperry Rand Corporation, New Holland, Pa.

Timetable performance with time-rated machines

NEW HOLLAND *"First in Grassland Farming"*



Friend to Friend

- **Farming's hard work—for muscle and brain**
- **Where does "integrated" farming fit in?**
- **Production costs must be reduced**
- **The silo is a sure bet for late corn**

● Who thinks the **hard work** has all been taken out of farming? Certainly not my friend, Bob Kline (at left in picture), who left his tractor running to visit a few minutes with me. But he gets so much done with a day's work! I was amazed at the number of hogs he raises on an Iowa farm and the amount of field work he must do each year.

No, you can't farm yet by **pushing buttons** as you sit in an easy chair. If our farm problems are going to be worked out, it will be by men like Bob who insist on making their hard work count.

● For weeks my mail has been full of letters expressing fear of expanding vertical integration—as practiced in the broiler industry—to other phases of farming. Readers fear it will reduce the man on the land to sharecropper level.

If you haven't read of this new development, I should explain that the farmer raises chickens for so much **per bird.** The hatchery, feed dealer, egg producer, and possibly the processor are "integrated" by long and binding contracts to supply their services.

Well, it's a free country. No one **need sign** such a contract. But the small, independent producer may find it hard to match cost of production with the big, integrated setups.

Now many confidently predict pigs will soon be furnished the same as baby chicks. Farmers will raise them for so much per head, and perhaps take a small cut in profits, should there be any. Already several Cornbelt **cattle feeders** are working on this basis—feeding on contract. They are taking no risks and furnishing only labor and equipment. They are running boarding houses for beef cattle.

Does all this suggest a **basic change** in our farming setup? It's too early, I think, to guess. Certainly huge amounts of cash are needed to run a farm to produce the volume now required for a fair annual return to the operator. Will he get **big enough** to dig up so much money or will he seek contracts with chain stores, feed dealers, or packers—under which they share the financial burden and the risks?

● Since 1920 I have been embroiled in first one and then another struggle for farm legislation to make **higher levels** for farm prices. A generation of farmers has come and gone in the meantime. Now just where are we? We have many more millions to feed and they want higher class food. We haven't added any number of **productive** farm acres. We have lost considerable export trade. And yet we're producing too much for farm prices to stay in line with what farmers must buy.

I think we can find much of the cause in the increased amount each farmer can produce. Competition continuously is reducing the number of farmers but not the amount of land or the farmer's **productive ability.** We tend to increase total production by placing farming resources in strong hands.

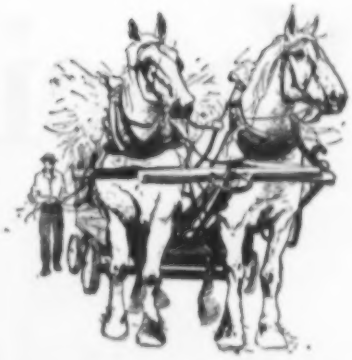
Frankly, the end isn't in sight. Regardless of any future legislation, the farmer who **survives** must cut his production costs lower than ever has been believed possible. He will also produce the kind and quality the market demands.

There is a **great future** in farming—for the fellow who works as hard at it as his successful brother in industry or the professions.

● Through the Midwest states where moisture has been below normal for four years, crops seem especially good now that rainfall is **normal** again. But I have felt some concern about the large amount of late-planted corn. Seems like good insurance to have an **extra silo** ready for some of it. You know a little silage left over will keep well for several years.

I recently was on a farm whose owner had 2½ years' supply of silage on hand and was making more! The weather could turn **dry again** and you might pick up a bargain in thin cattle on which corn silage would make cheap gains.

Kirk Fox



ABSORBINE
keeps 'em
on the job

Old timers who know horses and horse care are never without Absorbine. It's the recognized antiseptic veterinary liniment that can help catch a spavin before it settles . . . help clear up a hardened condition like ringbone. A large bottle costs only $2.50 at any druggist.
W. F. Young, Inc., Springfield, Mass.

TUMS for ACID INDIGESTION-HEARTBURN
QUICK RELIEF 10¢ HANDY ROLL
Always carry Tums for top-speed relief of acid distress. No mixing, no waiting. Take Tums anywhere.

FREEZER TIPS . . .

TO PROTECT frosting on decorated cakes, first freeze cake unwrapped. Then remove cake from freezer, wrap and seal tight with "SCOTCH" Brand Freezer Tape. Write label right on the tape itself! Moisture-resistant tape seals, holds fast in sub-zero cold to foil, film, paper, Saran or other wraps. Get "SCOTCH" Freezer Tape now, 35¢ or 98¢ in cutter-edge carton. ©1957, Minnesota Mining & Mfg. Co., St. Paul 6, Minn.

PEERLESS "All-Purpose" Farm ROLLER MILLS

CRIMP—CRACK—GRANULATE
All small grains and ear corn
Feed DUST-FREE rolled grain for better feeding results. Roll it with a PEERLESS. Complete line stationary and portable mills. Write for LITERATURE.
PEERLESS EQUIP. CO. Dept. 301 JOPLIN, MISSOURI

Recipe for Color 35-mm filmstrip, commentary, 12 booklets—$3.95. *Successful Farming.*

SUMMER SORES*
Chafed Udders, Foot Cracks, Wire Cuts, Teat Sores, Cowpox*
*Blu-Kote reduces pus formation, dries up secretions. It stays on! Effective against both bacterial and common fungus infections. Promotes rapid healing. 4 oz. dauber bottle $1 at drug and farm stores or by mail postpaid.
R. W. RAYLOR CO. • MORRIS, N.Y.

Vaccinate!

Your neighbor's vaccination won't save your pigs . . .

Peace of mind, against the constant threat of hog cholera, can be yours only when *your own* pigs are immune. Today's farm traffic and visiting carry too many risks of exposure, for you to gamble your pigs on the safety of your neighborhood. Again this fall, have your pigs vaccinated. Follow the professional advice of your veterinarian, and be safe!

M·L·V, the original modified live virus vaccine, is now in its 7th year of successful use on many millions of swine. M·L·V and anti-hog-cholera serum, used simultaneously as recommended, establish immediate resistance and long-lasting active immunity. M·L·V is patented and produced by the world's largest exclusive producer of veterinary biologicals and pharmaceuticals.

Fort Dodge Laboratories, Inc., Fort Dodge, Iowa

FORT DODGE

M·L·V

TRADE MARK

the original
Modified Live Virus Hog Cholera Vaccine

CONSULT YOUR VETERINARIAN
he knows best, what's best

The farmer's Washington

From page 18

ment be permitted to raise interest rate charges to whatever level it pays when it borrows money. His communication to Congress says the government pays more in interest than it can legally charge. This, it pointed out, amounts to "hidden subsidies."

Curious thing about the request is that the government itself chose to raise the interest rate it has to pay for borrowing money. That was done, it said, to get lenders to come forward with money. The situation gets even more crazy-quilt looking when you recall that Uncle Sam himself made money "scarce" through operation of his "tight money" policy during the past year or so.

Penicillin crackdown. The use of penicillin in mastitis ointments may be banned by the government next summer if newly announced regulations don't result in keeping the antibiotic out of the nation's milk supply.

This warning comes from officials of the Food and Drug Administration, charged with keeping the food supply pure. The F.D.A. has taken two steps designed to clean penicillin out of milk because of violent reactions experienced by some people.

For one thing, starting in August, no single shot of mastitis ointment can contain more than 100,000 units of penicillin. Before this regulation, some ointments contained as much as 1½ million units. Further, every label of ointment must carry a prominent warning advising farmers to withhold from market for three days, milk from treated cows. That's how long it takes for penicillin to work itself out of the udder.

F.D.A. surveys show that 6 percent of all milk tested contains the antibiotic, presenting a health threat. F.D.A. officials say several other antibiotics are just as effective against mastitis, but don't present a health hazard.

"Give me my inhaler."

"Now this picker keeps the farmer in mind"

"I guess that's the thing I like best about Oliver. They don't just think of the machine; they think about the man who's going to run it. Take this Oliver corn picker. Sure, it does a terrific job with today's bigger yields —but look what it does for *you* besides. Just move this lever and your snapping rolls open out. You clear trash without going anywhere near the moving chains. Another thing: you can keep your rolls fairly open in the morning, say, when the crop is wet—then close 'em in as the corn dries out. All from the tractor seat! Like I say, Oliver seems to think of the *farmer* as well as his crops. I agree with the other users: Oliver gives me the power to produce at the lowest possible cost."

Buy your new picker
on the
"Pay as you Produce"
purchase plan
Ask your OLIVER Dealer

YOUR OLIVER DEALER SAYS: "There's good reason Oliver thinks of the farmer. This company's been serving farmers going on five generations. Not as a side line, either; the farmer is Oliver's main concern."

The Oliver Corporation, 400 West Madison St., Chicago 6, Illinois
Also Manufacturer of the Famous Oliver Outboard Motors

OLIVER
"FINEST IN FARM MACHINERY"

Brush Your Teeth with COLGATE DENTAL CREAM... Brush Bad Breath Away!

And Colgate's with GARDOL Fights Decay All Day, Too!

Colgate Dental Cream with Gardol stops mouth odor all day for most people . . . with just one brushing!

Of all leading toothpastes,* only Colgate's contains Gardol to form an invisible, protective shield around your teeth that fights tooth decay all day . . . with just one brushing!

Gardol's invisible shield fights tooth decay all day . . . with just one brushing.

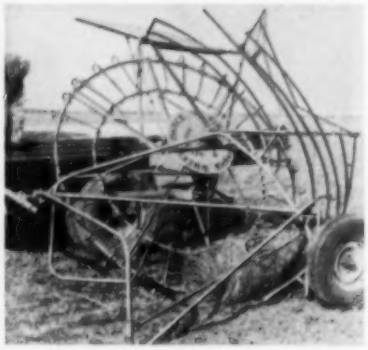
*THE TOP THREE BRANDS AFTER COLGATE'S.

GARDOL IS COLGATE'S TRADE-MARK FOR SODIUM N-LAUROYL SARCOSINATE.

CLEANS YOUR BREATH WHILE IT CLEANS YOUR TEETH

What's new in farming®

Tips you can use today



Bale loader. Large wheel rests on the ground, picks up bales, elevates them to convenient height for man on the trailer. No adjustments needed to compensate for wear. No grease points.—*Richardson Mfg. Co., Cawker City, Kans.*

Stock-tank water control. Automatic water-level control keeps water within reach of animals. Working parts are rust resistant. Unit locks to tank.—*Collins Stock Tank Control, Seymour, Iowa.*

Insect "smoker." Device fits in place of muffler, without harm to tractor or loss of power, to atomize chemicals for killing insects. Ends hauling water.—*Pocahontas Welding and Machine Works, Pocahontas, Iowa.*

More on page 32

"How much should you tell your life insurance agent?"

A NORTHWESTERN MUTUAL POLICYHOLDER SINCE 1935. *Today Mr. Kimberly owns four policies with this company.*

A guide for those who want to get the most out of their life insurance programs from **JOHN R. KIMBERLY**
President and Chairman of the Board, Kimberly-Clark Corporation

"IT'S NATURAL for a man to be somewhat reluctant to discuss his money matters. But it's just good business to give your life insurance agent all the facts. He asks only the questions that need to be answered—to bring out information that he knows from experience will help him to help you.

"Talk freely with him—and know that what you say will be held in strict confidence. Discuss things with your life insurance agent openly and frankly, just as you would with your doctor or lawyer.

"Omit even one fact and you may seriously impair the effectiveness of your insurance program. A qualified agent can be of tremendous help to you in planning for your future and your family's security. Choose your life insurance agent with care. And when you do, tell him the facts."

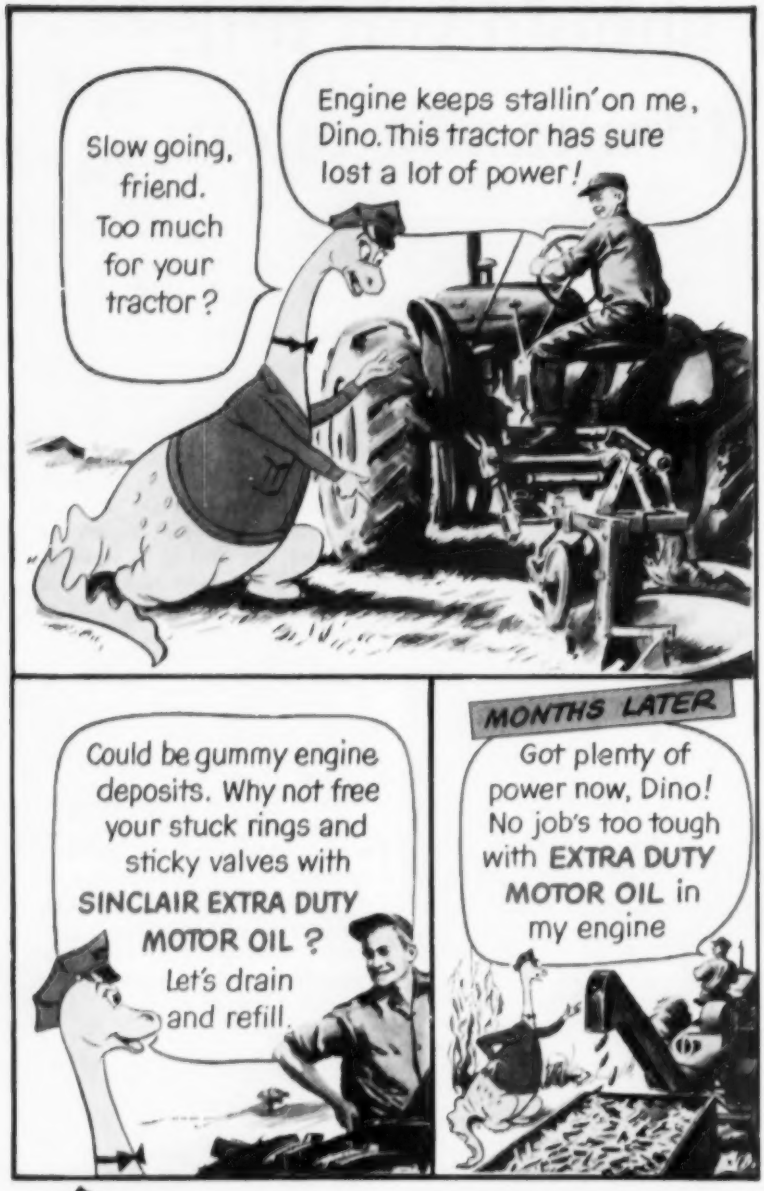
A CENTURY OF SAFEGUARDING TOMORROW

BY CHARACTER, ability and training your Northwestern Mutual agent is well qualified to help solve your protection problems. He represents one of the world's largest life insurance companies, this year celebrating its 100th anniversary. Ask him about Northwestern Mutual's new Quantity-Earned Savings (QES)...lower-than-ever net cost on all types of policies, $5,000 and up.

The NORTHWESTERN MUTUAL *Life Insurance Company*
MILWAUKEE, WISCONSIN

TIPS ON TRACTORS

by DINO, the Sinclair dinosaur



Get the finest for your car, too! Ask your Sinclair Representative about Sinclair Extra Duty Triple X Multi-Grade Motor Oil.

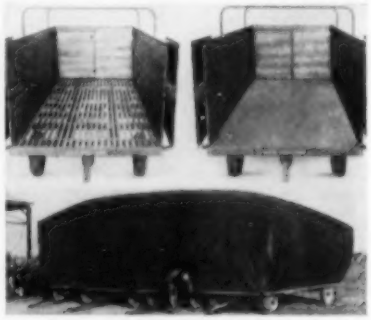
SINCLAIR
Petroleum Products for every farm need

Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

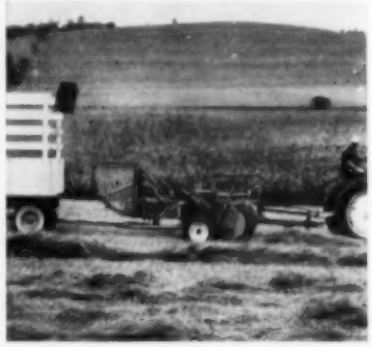
What's new in farming

From page 30

Udder sanitizer. Consists of plastic bag holding 3 gallons antiseptic solution, 6' rubber and plastic hose, self-cleaning sponge pad. Suspends from carrier track or wire high over gutter.—*Vineland Laboratories, Incorporated, Vineland, N. J.*



Dual-purpose drying wagons. Slatted floor converts from hay to grain floor with finely perforated metal sections. Up to 5 wagons can be used with dryer.—*New Holland Machine Co., New Holland, Pa.*



One-man hay-baling system. Bale ejector on twine tie baler makes bales about ½ size, "shoots" them into wagon. New conveyer takes bales from elevator, distributes them in the barn, discharging bales at 10' intervals on either side. The small bales make for easy handling. There is no stacking required. Depending on weight of bales, storage space is reduced about 10 percent.—*John Deere, Moline, Illinois.*

No runts here! Larro's flexible weaning-feeding plan helps slow-starters catch up in a hurry. Ben Louis of Farmington, Minn., is shown with his healthy, thrifty pigs. They balance their own ration . . . will hit top markets in a hurry.

More and more hog growers report top results with this new flexible weaning-feeding program. They agree once you try it . . .

you'll wonder where the runts went

by Steve Carter

Wean 'em anytime from 3 to 8 weeks. LarroSureStart-SurePig gets pigs started fast. 30 spring litters averaged 9.3 pigs for Louis, weighed an average of 44 lbs. when weaned at 8 weeks.

Wean anytime from 3 to 8 weeks. Like Ben Louis you can cut feed costs, raise heavier pigs, beat the scours problem, rebreed earlier and keep sows in better condition.

Hundreds of top hog men have tried the new Larro flexible weaning-feeding program. Results like these reported by Ben Louis are typical:

- **Better than a 9.1 pig average from 60 litters.**
- **Pigs averaging over 44 lbs. at 8 weeks.**

Larro's common-sense weaning-feeding plan can help you raise more profitable hogs because it takes the guesswork out of feeding during the critical starting period.

Larro SureStart and SurePig make early weaning practical. Or you can wean anytime from 5 to 8 weeks of age. You choose the plan that best fits your own management and feeding practices.

SureStart is a complete starter feed and milk replacer for weaning at 10 lbs. Pigs eat it readily from the 5th day . . . get a growth and health boost. In emergencies, this high-level nourishment saves orphan pigs, runts and pigs on poor-milking sows.

SurePig is a highly palatable starter for pigs from a few days of age up to 8 weeks. It's fortified with antibiotics, arsanilic acid, vitamins and Larromin mineral blend — including zinc to help prevent Parakeratosis. SurePig helps eliminate runts and produce strong, healthy pigs economically.

Easy on sows

Sows stay in better condition, even when nursing pigs for full 8 weeks. They're in better condition for early breeding and the critical gestation period . . . have extra finish to go to market sooner.

Keep pace with today's changing times . . . start your fall pigs on the Larro SureStart-SurePig plan. For your dealer's name, free pig folder and Swine Record Book, write Swine Dept., care of the address below.

Larro Feeds
General Mills
FEED DIVISION
Minneapolis 1, Minnesota

SS/SP-3-7

100 lbs. pork for $9, including all feed for sows with corn at $1.10. That's all it cost Louis on last year's fall pigs. Figure includes 49 lbs. of Larro feeds for 100 lbs. gain.

Home-made self-feeders help Louis hold down equipment costs. Feeding program includes SurePork 35 for sows, SureStart-SurePig for young pigs, SurePork Super 40 to market weight.

Top condition of sows, 1 to 3 weeks after weaning, shows added benefits of Larro program. Extra taste appeal of Larro SureStart-SurePig gets pigs eating early . . . helps prevent "suckling" sows thin.

"I wouldn't take $1,000.00 for it

. . . if I couldn't get another." That's how Earnest Grimes of Waynesburg, Pennsylvania, feels about his Wood's 80-inch cut Rotary Mower-Shredder. He says, "Never saw anything equal it in cutting brush—cut Locust, Hickory and Wild Cherry 3½" in diameter—walks right through it. Use it for stalk shredding, too." Wood's PTO-operated Rotaries mow, shred, and mulch anywhere at lower cost, at higher speeds, with less maintenance than by other methods.

12 MODELS—42" to 114" Cut

42" under-mounted for Farmall Cub, Lo-Boy, Super A, 100, A-C G, M-H Pony and Pacer. 42" rear-mounted for Fast-Hitch Cub and Lo-Boy. 61" and 80" rear-mounted for Fast-Hitch Farmalls Super C, H, M, 200, 300, 400, I-300 (all use 3 pt. adapter), and all standard 3-point hitch tractors (Ford, Ferguson, Oliver Super 55, etc.). 61", 80", and 114" drawbar pull-types for any 2, 2-3 and 3-4 plow tractors. 80" offset model (2-3 plow) for working under trees. All have free-swinging, quick-detachable blades. J

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BMB *Company* HOLTON KANSAS

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HOW do you determine when a youngster is capable of driving a tractor?

Your neighbors say

Arley Hill, Brookings, South Dakota: They learn on a small tractor without pulling any implements at 8 or 9 years of age. They use them for choring around the farmstead. They just gradually learn to drive the bigger tractors.

We teach them to be extremely careful in the field. We have the boy, the only one who does field work, shut the motor off before he gets off the seat no matter what the reason, and this is for all operations. As yet, the girls have not done any field work.

Frank Steiner, Solano County, California: Our youngsters had to learn what made a tractor tick before they got behind the wheel. We have a farm shop and while overhauling tractors I'd show our three boys and one girl what the different parts were and how they worked.

When we thought they knew enough about the machine's operation, I'd show them the controls and explain them. I'd ride with them several times before they tried it themselves.

We had no set age for them to begin driving. It mainly depended on how much they knew and how much they wanted to. They haven't had an accident.

Photographs: Dodds, Dell, Knapp, Drummond

◄ **John Streller,** Perry, Oklahoma: Most boys are smarter than you give them credit for being. Within reason, I've always let my three boys try about what they thought they could, and let them learn to drive through experience.

A good part of the supervision of boys driving tractors comes in the job you let them do. I wouldn't think of letting Gerald, 12, take a mower blade into a field, but I don't worry about his plowing in the large, even fields near the house not bordering on creeks.

Edward Marshall, Tompkins County, ► New York: My boy, Ed, Jr., is 10 years old and has been driving a tractor four or five years now.

He was born and brought up with a tractor. He rode on the seat with me when he was 4 years old.

There's always someone with him when he's in the field. I think he should be 12 or 13 before I let him go out alone. He drives around when we fix fences and use the tractor for similar chores. That saves a man's jumping on and off.

I wouldn't let him use it when there are other children around. They get to fooling. Ed likes to drive the tractor but he isn't always begging to use it.

More clean corn from the field. Sure, you get cleanest picking with this new 2-row mounted NEW IDEA picker. And cleanest husking, too, because trailing husking bed, with its ten extra long husking rolls, has largest husking capacity of any mounted picker. Count on getting more down corn, too.

Want to pick cleanest, husk cleanest, get more down corn?

New 2-row mounted New Idea picker gives you more clean corn, plus important new features for greater convenience, safety, long life

NEW IDEA engineers carried out one of the most extensive development and field testing programs in NEW IDEA history, proving and improving this new picker, to make it the finest mounted picker on the market.

By a wide margin — "Pickers of the Champions." Proof from picking contests is always interesting. Since 1950, NEW IDEA pickers have won 53 titles in 50 1-row and 2-row contests. That's a record no competitor can even approach. Again in 1956, average corn loss by 1-row and 2-row NEW IDEA pickers was less than the average corn loss of all other pickers.

Fits 36 tractors. You get higher trade-in value, because no other mounted picker fits so many tractors. For safety and convenience, four controls are handled from the tractor seat — snapping roll spacing, raising and lowering snapping unit, ear deflector, and wagon elevator.

Less greasing, more safety. Here are just a few of the many new features:

- You save time with 30% fewer grease fittings on snapping unit, 50% fewer on husking unit, and two banks of 5 fittings each to upper husking roll bearings.
- Mounting ladder has been added for safety.
- New clearing rolls and rubber flights in wagon elevator give quieter operation.
- New louvered upper corn saver screen saves more shelled corn.

And there are other new features that give you more convenience, more safety, longer life, and finest performance.

Farmers tell why they buy. It's simple, honestly. Farmers use more NEW IDEA pickers because they pick cleanest, husk cleanest, and get more down corn.

Look at the new 2-row mounted picker at your NEW IDEA dealer's soon. Or write today for free literature.

Pick Cleanest, Husk Cleanest, Get more down corn

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Dept. 239, Coldwater, Ohio

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- ☐ 1-row pull-type picker
- ☐ 1-row pull-type snapper
- ☐ 2-row mounted snapper

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That's what new Chevrolet trucks are most famous for. V8 or 6, they'll go the limit with your dawn-to-dusk hauling job —and they'll save you upkeep dollars while they're at it!

Long hours, rough, back-road hauls, a tight operating budget—those things don't bother Chevrolet trucks. Their reputation for long life and low-cost hauling was earned on thousands of farm jobs under those very same conditions.

It's a combination of solid construction and super-efficient power that makes Chevies top hands. Frames, axles, suspensions are built to shrug off the roughest grinds. Engines are designed to get the most out of a gallon of gas. They *do*, too—V8's with the industry's shortest stroke and 6's that are known all over as the economy champs. Talk it over with your Chevrolet dealer. He'll supply complete details. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

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Successful Farming report on farm policy: first in a series

1957 is a fateful year in the history of farm policy. It's the year Secretary Benson put his baby—flexible price supports—back in the lap of Congress. It's the year Congress threatened to kick the Soil Bank—of uncertain parentage—clean out of existence. This new series explains the farm program breakdown, examines probable alternatives

End of an era in farm programs

Price support laws aren't protecting farm income. Acreage allotments aren't controlling production. The "farm bloc" is split. Farm laws, developed over the past 25 years, aren't working

By John Harms

In August 1954, after veto of one major farm bill, the United States Congress approved the Agricultural Act of 1954. At that time, Ezra Taft Benson, secretary of agriculture, declared:

"It is gratifying that the major part of the administration's farm program is now the law of the land. Most significant is that the law establishes the vital principle of flexible price supports which will help gear our farm operations to the needs of the nation, and at the same time minimize the need for controls over our farm production and marketing."

Less than 3 years later, in May 1957, the same secretary of agriculture declared ominously: "The present legal formulas governing acreage allotments and price supports are proving obsolete."

He explained that flexible supports could work *up* as well as *down*—and he feared that once back up they'd create the same surplus and other problems.

Farmers had been led to believe that farm conditions would improve after the flexible law went into effect and had a chance to operate. The secretary successfully defended this law several times before Congress on grounds it should be given a fair chance to work. Then in 1956, President Eisenhower and Secretary Benson asked and got the billion-dollar soil bank—to help make the flexible-support program work. He predicted the soil bank would "help remove the crushing burden of surpluses."

Now the secretary declares acreage allotments are a failure, and that his flexible support law is not working. Congress agrees allotments aren't working—and adds that the soil bank is no good, to boot.

This much is clear: The farm program *isn't* working and is busting—or being busted—at the seams. Aside from official optimism the past 5 years, here's what's happened:

- Farm programs aren't protecting farm income. Net farm income 4 years ago was $14.3 billion. This year it's estimated at about $2 billion less.
- Support rates have gone down—reduced an average of 20 percent: corn, 20 percent; barley and sorghums, 26 percent; oats and flaxseed, 25 percent; rye and soybeans, 21 percent; cotton 12 percent.
- Surpluses are still at record levels, with at least one new one coming up, soybeans.
- Acre allotments are as low as the law allows.
- 1957 farm production will be as big as last year.
- U.S.D.A. is planning to spend an unheard-of $5 billion on nothing but farm programs in the next 12 months.

In short—although the government is spending more money than ever before, with the tightest rules and lowest supports officials say are possible—surplus production continues and farm prices and income stay in the rut. The crime about it all is that farmers are getting a bad name in cities and will have little to show for it. There's no guarantee that after the $5 billion is spent any problems will be solved or that less money will be needed.

Why aren't allotments and supports, plus the mighty soil bank, working? There are two sides to this and it's a hot argument.

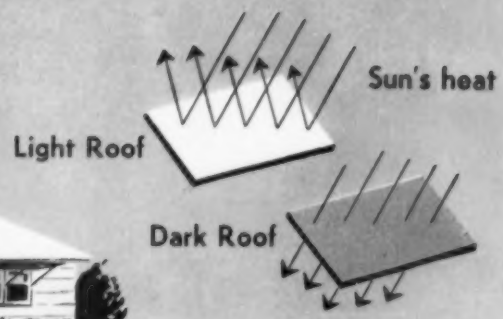
- Secretary Benson says programs just aren't modern enough to handle the "new dimension" in farming—technology.
- The other view, as expressed by Chairman Harold Cooley of the House Agriculture Committee, is that (1) the technological revolution in farming didn't "explode" suddenly this spring, but has been building up over the years, and (2) Benson is not interested in making them work.

As a matter of fact the wreck was caused by a variety of things—not just one man or just one law. A look at some of the important factors strongly suggests that the whole farm program tragedy could have been avoided.

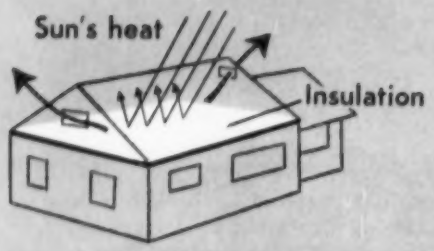
- We have the know-how, land resources, and equipment to produce ourselves into bankruptcy in a "free" market without any government help. Not counting the many new [*Turn to page 62*

Keep out the heat or remove the heat that gets in—so you can

Awnings

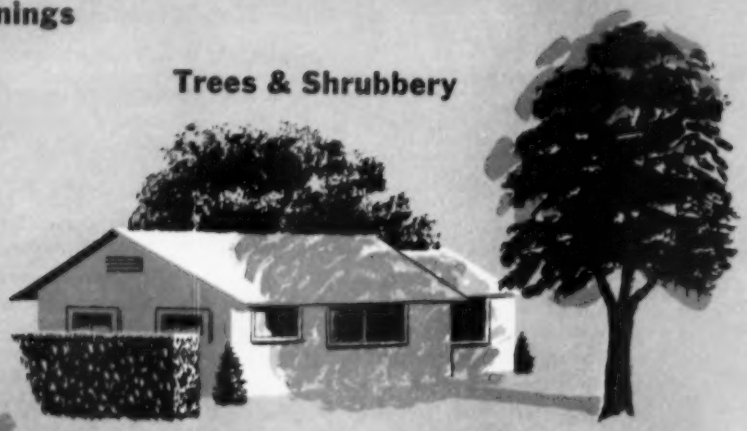


Colors



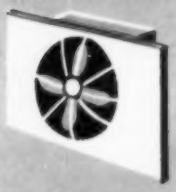
Insulation

Trees & Shrubbery

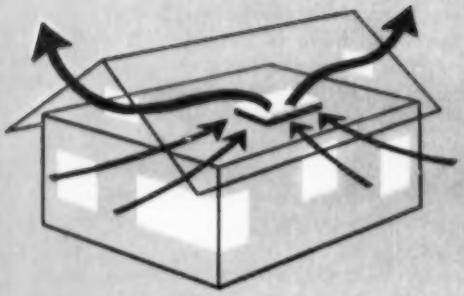


Overhang

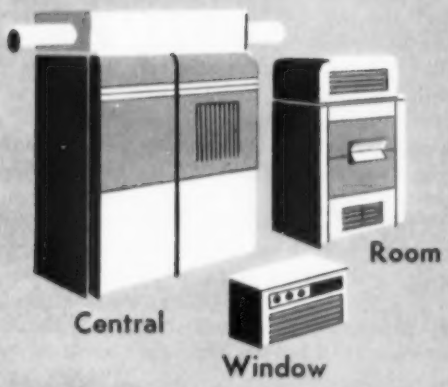
Window Fan



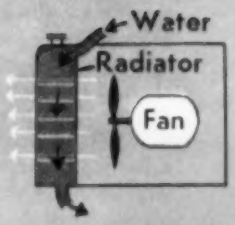
Evaporative Cooler



Attic Fan



Mechanical Refrigeration



Radiator and Cold Water

Keep cool in summer

By Harold Stover
Kansas State College

You don't need to swelter in the daytime and experience sleepless nights this summer because of accumulated 100-degree daytime temperatures. You *can* make your home comfortably cool.

There are two ways to maintain comfortable summer conditions. *First, prevent as much heat as possible from getting into the building, and second, remove the excess heat that does reach the interior.* The illustrations at the left show effective ways to do this.

How to keep heat out

Insulation. Insulating the walls and ceilings of your house will slow heat infiltration from the hot summer sun. It is estimated that 40 percent of the heat entering an uninsulated house comes through the roof. If you have a cooling system or plan to get one, insulating will make the system more effective and less expensive to operate by reducing the amount of heat that must be removed from the house.

Overhangs. Since the sun shines on the south wall of your house most of the day in summer, the use of shading devices to protect these southern exposures is of prime importance.

Awnings. Canvas or metal awnings are from 65 to 75 percent effective in reducing the heat load coming through the windows.

Louver-type screens. These screens are miniature venetian blinds that deflect the sun's rays. They are about 80 percent effective in reducing the heat load from windows on the south and 25 to 50 percent effective on windows on east and west.

Light colors. Light-colored shades, blinds, and window hangings reflect the solar heat better than dark ones. Similarly, the heat load on exterior walls can be reduced somewhat by painting them white, cream, or other light colors. A light-colored roof absorbs only half the amount of heat that a dark one does.

How to remove heat that gets in

Night air cooling. In most of the central plains area, night temperatures are low even when heat records are broken during the day. You can take advantage of this by using large fans to draw air into the house at night when the outside temperature becomes lower than the inside temperature. This provides immediate relief to the occupants, and lowers the temperature of walls, furniture, and equipment in the house, helping to carry you over the next high-temperature period.

An attic or basement fan for night air cooling should be installed in a size to provide 20 to 30 changes of air per hour. A $\frac{1}{4}$ to $\frac{1}{3}$-hp electric motor operating a 36″ to 42″ fan will take care of the average home.

If installed in the attic, the fan can also exhaust heat build-up from the attic through large louvers in the gable ends or overhang.

Approximate capacities of attic fans and the inlet and outlet louver openings are listed below as a guide for their selection:

Volume of house, in cu. ft.	Fan size, inches dia.	Free air opening to attic, in sq. ft.	Opening from attic, in sq. ft. Wood louver	Opening from attic, in sq. ft. Metal louver
7,400	24	6.2	12.4	7.8
11,000	30	9.2	18.4	11.5
16,000	36	13.3	26.6	16.6
24,000	42	20.0	40.0	25.0

Night air cooling, however, does have some disadvantages. There is apt to be noise from the fan if located in the living quarters, dust is likely to be brought into the home, if nighttime humidities are high the humid air will be drawn into the house, and you can never get your house cooler than the outside air.

A window fan is a fast, easy way to make a good air-movement system for one or more rooms. It may be limited, however, in the area it can cool, and like a basement fan, it will not remove the accumulated attic heat.

Cooling with well water. Cooling the air in the home by the use of well water is another method. Air, blowing over the radiator surface, is cooled by the cold well water circulating through the radiator. On the average, about one gallon of water per minute must be circulated through the radiator for each 1,300 cubic feet of space to be cooled when the water temperature is 60 degrees or less.

Evaporative cooling. Another method of cooling you can use is air cooling [*Turn to page 71*

Drawings: Lindborg

Brandley's picker-sheller power unit is not limited to harvesting corn. He has modified it so he can plant, fertilize, and spray as well.

Four-row planter was built from two 2-row units and mounted so they can be raised hydraulically. Brandley carries seed behind the tank and can look down into the seed boxes to see seed level during planting.

He uses 200 pounds of liquid 8-24-0 starter fertilizer above seeds—no potash burn.

To use unit as sprayer, planter is removed, boom added. Joints in boom are discarded universal joints. Tank is 500-gallon size.

Picker-sheller, now on power unit, is in photograph at right. It picks 100 bushels an hour and enables Brandley to handle shelled corn rather than ear corn in one operation.

He made his equipment fit continuous corn

By S. S. DeForest

Five years ago Elden W. Brandley, Wayne County, Indiana, started growing continuous corn. As he says, "I got a little corn-conscious growing only corn and I've tried to improve on parts of a system as I learned more about it."

Then 3 years ago he decided to switch from handling ear corn to handling shelled corn. He said this shift was "no halfway deal." He had to remodel or design all his machinery and buildings to fit this change-over. Here's how it works:

Brandley plows and fertilizes in the fall. He sprays on 400 pounds of liquid 3-11-11, then an additional 84 pounds of actual nitrogen.

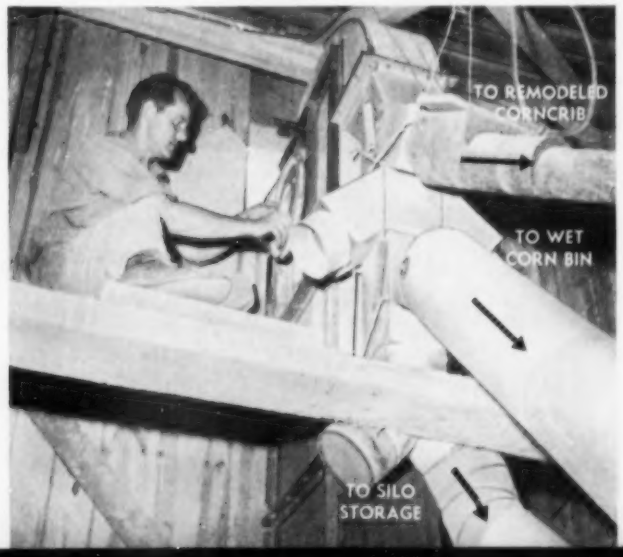
At planting time, using a 4-row planter he made to fit the front of the picker-sheller power unit, he carries liquid fertilizer and applies 8-24-0 starter at the rate of 200 pounds an acre. He uses this same power unit later for spraying.

When the corn is ready to harvest, between 25-30-percent moisture, Brandley [*Turn to page 66*

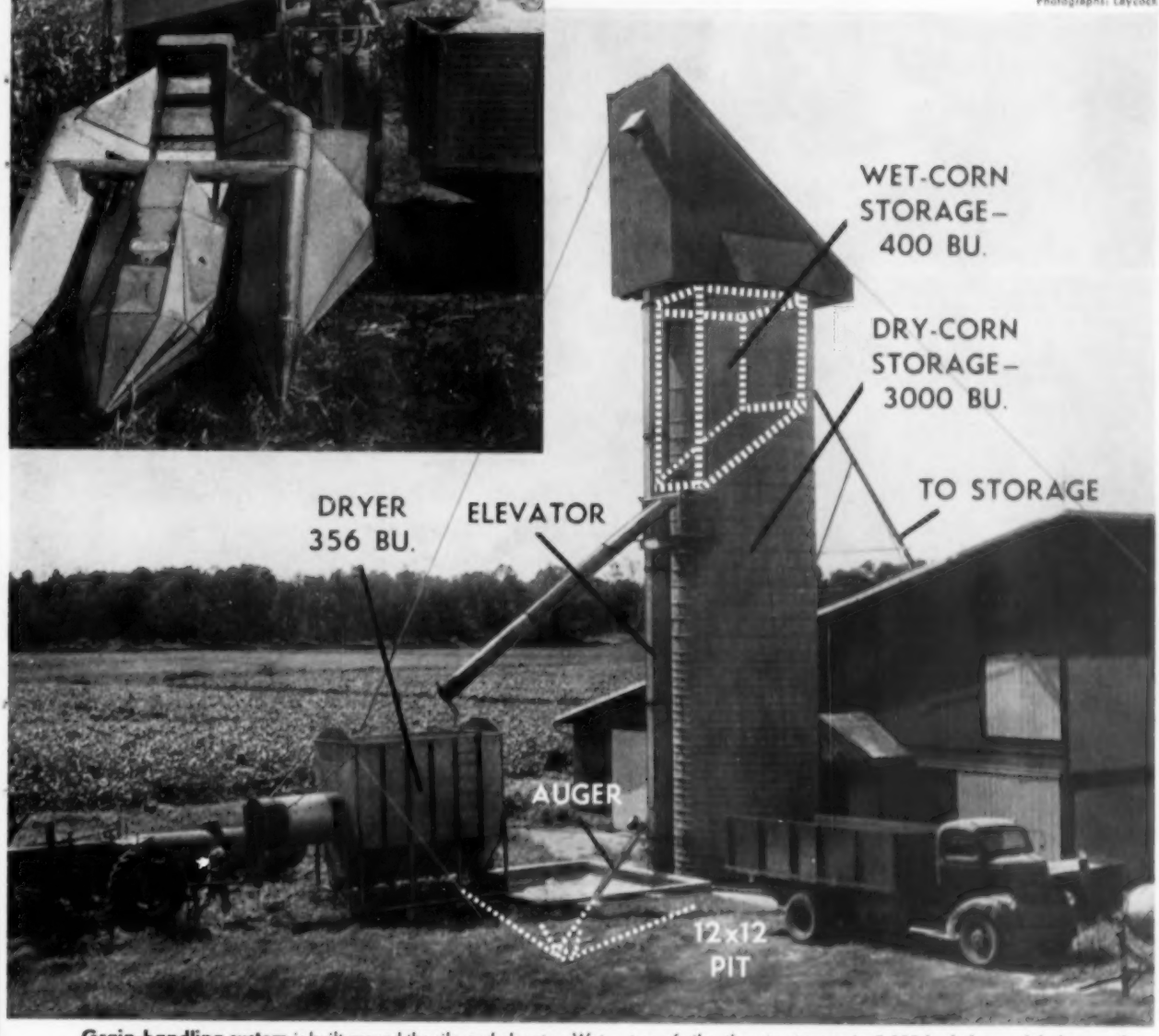
Brandley also remodeled his buildings to fit his continuous corn system. Here's how he did it.

His dryer is an important part of system. Large photograph shows how it is tied in with the rest of the handling equipment. Brandley uses thermometer to check progress of grain drying. Air temperature is indication of moisture content.

In head house on top of silo is distribution system for diverting grain from top of elevator to wet-corn bin or to various storages. There are extra openings for future uses should the need ever arise.



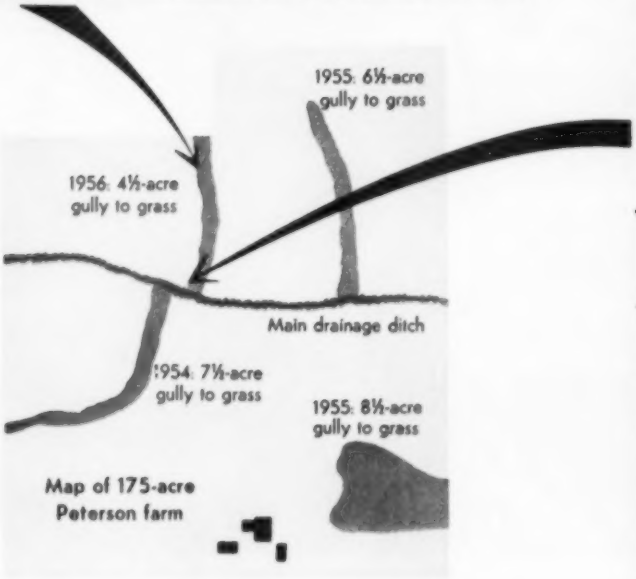
Photographs: Laycock



Grain-handling system is built around the silo and elevator. Wet corn, dumped in 12'x12' pit, is elevated to 400-bushel bin in silo, slides from wet-corn bin directly to dryer. Dry corn goes into pit, to top of silo, then to storage in 8,000-bushel remodeled corncrib or truck on far side of barn, or to 3,000-bushel-plus storage in bottom of silo. The short auger in the pit can be used to empty both storages.

Wet-corn storage bin is suspended in top of silo. Bottom slopes 6' for 8' square bin. Weighted pail determines amount of corn in bin. Red light operated by microswitch also indicates this.

In remodeled corncrib area, dried corn runs from top of silo to truck. Auger, used to empty bins, is 6"x11' long and powered by ¾-hp motor. Unit hangs from track, moves easily.



Peterson stands 15 feet below his line fence in picture above. He drives tractor across same spot when gully is closed, seeded to mixture of brome, alfalfa, Ladino, timothy, redtop, and reed canary. Comparison pictures (top of opposite page) show mouth of gully replaced by sloping ramp. You're looking across 4½ acres of new farmland. Government paid about half of total cost of earth moving, fertilizing, and seeding.

Map at right locates the 4 big gullies that have been closed and seeded in this amazing "farm remodeling."

BIG GULLIES GO TO GRASS

27 acres of new grassland were recovered inside the fences of a Missouri hill farm. It's a short-term investment that's paying off

By T. L. Wainscott

Down around Clarksdale, Missouri, Marion (Bob) Peterson has folks scratching their heads. First, he's changed the landscape so much people fail to recognize the farm. Second, when they find out what he's doing, they wonder if he hasn't got something worthwhile underway.

Big gullies had his farm split all to pieces (see map). Brush and trees cut crop yields in adjoining fields.

Bob turned those gullies into productive grass waterways. He spent some money to do it. Under the ACP program, his half of the total cost for 27 acres averaged $62.50 per acre. Costs were held down. A sloping ramp replaced the conventional drop inlet simply because it was cheaper. Once seeded down, the ramps have held.

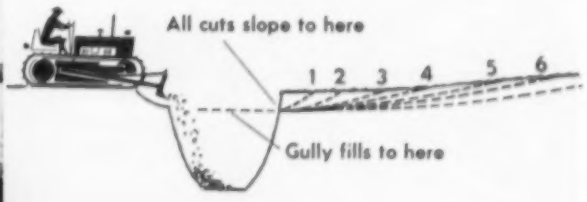
Bob is getting his money back *fast*, cutting the forage off the waterways and feeding it to his dairy herd. Cows don't graze the waterways. The 7½-acre waterway started in 1954 fed 35 dairy cows for two weeks last spring at first cutting. The second cutting fed them another two weeks. That's one month's feed for 35 cows from just 7½ acres. Bob says "they're the best acres on the farm!"

Photographs: Christie

Here are the steps in closing a big gully

Bob harvests the saw logs with his chain saw. When skidded out and hauled to a local sawmill, the logs become a valuable supply of lumber for general farm repairs. Tree tops stay in the gully.

Bulldozer pushes everything into the gully and covers it with at least 3 feet of soil. Sinks which develop are filled with front-end loader. Ramp at the outlet contains no trash, is solid earth.



Fill is bladed in from fields on both sides of gully. First cut is as deep as possible (above). All other cuts bevel to same depth on gully lip. As many as 8 or 10 cuts are made, progressing back into the field. When gully is full, soil samples are taken in new waterway and on new field soils. Fertilizer is applied as tests indicate.

A thousand miles of excitement

A trip to this northern country will let you see and do more things with less driving than you could possibly imagine

By Mike Bay

Vacations can be fun and not too costly if you plan your trip carefully—and with imagination.

To challenge your imagination, *Successful Farming* is suggesting this trip to the Northland. Our map shows only one of several good routings through Minnesota to Canada and return.

This trip is designed to capture the fancy of every member of the family. Of course, fishing and swimming are the favorite activities of farm families visiting this area.

You'll nearly always be near a clear, clean lake, placing all the water sports at your beck and call. In Minnesota alone you have 10,000 lakes for sailing, water skiing, power-boating, surfboarding, swimming, or even skin-diving.

But just to make sure everyone's fun needs are met, this vacation land offers golf, tennis, sight-seeing, shuffleboard, riding, dancing, playground equipment for the kids, and just plain loafing.

In this Northern Lake Country side trips are unlimited. You'll want to get more details on these by writing to the Division of Promotion, Department of Business Development, State Capitol, St. Paul 1, Minnesota, and to the Canadian Government Travel Bureau, Ottawa, Canada.

Now, to get started on our trip, let's go to Canada via eastern Minnesota. If you live west or south of Minneapolis you may want to reverse the routing shown on our map to save mileage.

Depending on how many miles you'll have driven before reaching the beginning of our trip, you may wish to stay overnight in the Minneapolis-St. Paul area. If you expect to arrive the week of August 24-Sept. 2, you should make your reservations well in advance. This is Minnesota State Fair week.

At the Twin Cities you'll find the finest hotel and motel accommodations along with shops of fashion, first-rate entertainment, and famous eating places. You'll enjoy seeing Southdale Center in Minneapolis. Acclaimed for architectural beauty, it embodies a modern concept of shopping facilities.

For a better understanding of the development of earth and man, visit the Science Museum and see the dinosaurs and other exhibits.

Leaving St. Paul on your way north on Highway 61, you'll go through resort centers such as White Bear Lake and Forest Lake. You'll cross the southern boundary of the great Northwoods. The change from diversified farming to evergreen forests will begin to be noticeable. [*Turn to page 112*

1. Shopping at Southdale Center in Minneapolis.

Photographs: Lake, Infinity, Inc.; Canadian Government Travel Bureau

2. At Duluth, see trains shift ore load to boats.

3. Split Rock Lighthouse—highest in the U. S.

8. See the Mississippi River start its journey to the Gulf.

7. Paul Bunyan—a must for kids.

6. Winnipeg—a foreign capital you'll enjoy.

4. Ely—gateway to matchless canoeing and camping.

5. The world's largest open-pit mines.

TOMATO ROSES add gay trim to this dewy-fresh vegetable salad. It's pretty, easy to fix.

Wonderful for eating outdoors and dressing is tops, too. Use fresh vegetables from your garden or make ahead shimmery molds of jellied cucumber salad. If a big crowd is coming, make in squares.

RING THE DINNER BELL for all those with robust appetites. Hearty main-dish salads have great appeal—especially when they are cool and crisp looking.

Chef's Potato Salad or avocado stuffed with Salmon Salad rate high with the men—they are good and stick to the ribs.

Photographs: Allen Snook, Inc.

FOR LIGHT LUNCHES, especially when entertaining the ladies, you will want to try a lovely fruit plate or tasty molded salad and dainty sandwiches with it.

Use plump, ripe fruits in season and add variety with canned or frozen fruits. Snowy cottage cheese and sherbet add flavor.

for every occasion

By Mary K. Farnen

Crisp, cool salads are prime favorites for cool summertime eating. Choose your salad to suit the occasion. When men are to be in on the fun be sure the salad is substantial, such as one that contains meat, fish, cheese, or eggs. For the ladies there is nothing that pleases them more than letting them choose from a platter heaped high with juicy chilled fruits.

For large groups, select a salad that can be made in quantities, can be prepared as far ahead as possible, and one that's easy to serve. With the wide choice of fresh fruits and vegetables now available you can plan a crisp, colorful salad that will be highly suitable for any occasion.

Tomato Rose Vegetable Salad

- 5 medium tomatoes
- 5 carrot curls
- 1 head lettuce
- 1 small bunch leaf lettuce
- 3 to 4 bunches Bibb lettuce
- 1 dozen radishes
- ¾ cup sliced celery
- 1 green pepper cut in rings
- 1 cup cauliflowerets
- 1 recipe *Special Salad Dressing*

Cut tomatoes in sixths; place carrot curl in center. Break salad greens in bowl, add other vegetables. Place salad dressing in center, tomatoes around edge.

Cool-as-a-cucumber Salad
(Makes 4 molds)

- 1 package lime-flavored gelatin
- 1 cup hot water
- ½ cup cold water
- 1 tablespoon vinegar
- ½ teaspoon salt
- Dash pepper
- 1 cucumber
- ¼ cup sliced radishes
- 2 tablespoons sliced green onions and tops

Dissolve gelatin in hot water; add cold water, vinegar, salt, and pepper; chill. When mixture thickens slightly, put a cucumber slice in bottom of each individual mold; cover with thin layer of gelatin; chill. Dice remaining cucumber and add with radishes and onion and mix with remaining gelatin and finish filling molds. Chill till firm.

Chef's Potato Salad (Makes 6 servings)

- 4 cups cooked, cubed potatoes
- 1 onion, chopped
- 3 hard-cooked eggs, sliced
- 1 cup diced celery
- ¼ cup chopped green pepper
- 1½ teaspoons salt
- ¼ teaspoon paprika
- ¼ cup French dressing
- Mayonnaise
- ¼-inch strips of cooked chicken, ham, and cheese

Combine first 8 ingredients and chill for several hours. Just before serving add mayonnaise to moisten. Mix well. Top with strips of chicken, ham, and cheese. Trim with hard-cooked egg slices if desired.

Salmon-Avocado Salad
(Makes 6 servings)

- 1 1-pound can (2 cups) salmon
- ¼ cup chopped celery
- 2 hard-cooked eggs chopped
- ¼ cup chopped ripe olives
- 2 tablespoons chopped dill pickles
- Mayonnaise
- 3 avocados, halved
- Lettuce cups

Remove skin and bones from salmon; flake. Add next 4 ingredients and mayonnaise to moisten, mix lightly. Peel avocados; dip in lemon juice to prevent browning. Fill with salmon salad, serve in lettuce cups.

Orange-Apricot Salad (Serves four)

- 1 1-pound can (2 cups) apricot halves
- Apricot syrup
- 1 package orange-flavored gelatin
- 1 cup hot water
- 2 tablespoons lemon juice
- 1 3-ounce package cream cheese
- ½ cup chopped California walnuts

Drain apricots; reserve syrup and add water to make 1 cup. Dissolve gelatin in hot water; add lemon juice and apricot syrup mixture. Place apricots and half the gelatin in mold. Chill till partially thickened. Beat cream cheese till light; gradually stir in remaining gelatin and nuts. Pour over clear apricot layer and chill.

More recipes on page 80

- Price will be competitive with present wormers
- There is no problem of getting animals to eat it

HYGROMYCIN newest worm killer

- Kills worms we have been unable to control in past
- Not only kills worms but limits the worm's ability to lay eggs
- Continuous feeding enables us to prevent worms—not just treat them
- Is not toxic—feed to market hogs or breeding stock

Continuous feeding of low levels of a new antibiotic, hygromycin, may soon put worm control in hogs on the basis of *prevention*, not treatment.

Most of our present wormers are given on a one-shot treatment basis. This new hog wormer not only kills the worms but exerts actions against the ability of the worm parasites to reproduce (lay eggs). Hygromycin can be fed daily in the ration for continuous protection.

Hogs infested with many kinds of worms

In one Wisconsin study by A. I. Goldsby and Dr. A. C. Todd, it was found that the market hog contained an average of 463 worms. These same hogs contained an average of only 8 roundworms—455 other worms.

Our present wormers control only the large roundworm with the exception of piperazine, which also has been shown to partially control nodular worms. Hygromycin kills the big three in hog worms—large roundworms, whipworms, and nodular worms—and shows promise of controlling still others. Three weeks after treatment begins, egg counts are at or near zero. This is a safeguard against continuous reinfestation of the animals.

What hygromycin is and how it acts

Hygromycin is an antibiotic with broad spectrum activity against a number of species of worms. It is produced by a microorganism with the scientific name of *Streptomyces hygroscopicus*.

The exact manner in which hygromycin works is not fully understood. But results are fairly evident.

The fact that it restricts worm egg production makes possible for the first time the continuous treatment of worms. Researchers believe that it is now possible to exterminate all the worm parasites in a closed herd of pigs at a given farm.

Can be fed to hogs of all ages and sizes

This antibiotic will soon be available in pig starter and grower rations, and in complete rations for older hogs. Since so little of the antibiotic is needed, it must be carefully mixed in these feeds by feed manufacturers. A complete mixed feed contains 12,000,000 units of hygromycin per ton.

To keep worms from getting the upper hand in your hog lot, it is recommended that you add it to the first creep feed and continue feeding it until the hog is about 100 pounds. Weaning pigs that have not received this new wormer should get it in their feed from about 50 pounds to 140 pounds.

It is safe to feed and palatable

It is safe for even baby pigs. In one test, pigs weighing 7 pounds were fed this antibiotic at 4 times the recommended level for 84 days. The treated pigs gained 13 pounds more in this time than the nontreated ones and required less feed per pound of gain.

In two experiments, sows and gilts had about the same number of pigs of about the same weight and vitality whether they were fed hygromycin or not.

In experiments conducted to date with chickens, sheep, and cattle, hygromycin appears very nontoxic to the animal.

In palatability tests, hogs seem to find the feed containing the antibiotic just as tasty as feed without it.

How much will the new wormer cost?

It will be comparable in cost to other recent hog wormers. Since a very low level is used in the feed, you can feed it a long time at a low cost. The fact that it kills three kinds of worms instead of one or two and stops worm egg production, too, may prove it cheaper than other wormers in the long run.

PERFORMANCE TESTING . . .

Does it pay off in the feedlot?

Step by step we followed a group of performance-tested cattle from the day they were dropped on the range, through a supervised Iowa 4-H feeding project, and into the cooler. Records show it pays to know the breeding and performance behind the feeders you buy.

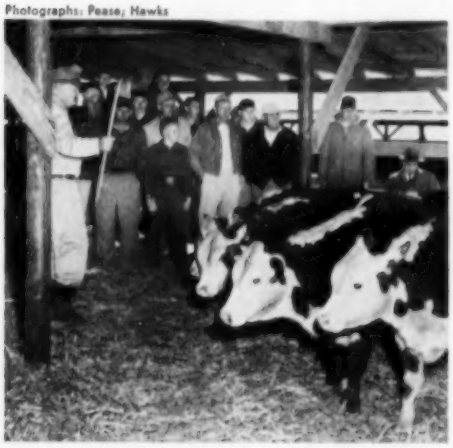
Through cooperation with C. H. Codding and Sons, Foraker, Oklahoma, and the Buena Vista County, Iowa, 4-H Junior Cattle Feeders Project, we gathered the necessary data.

Bulls can now be registered with their standard breed association and the American Beef Cattle Performance Registry Association. The latter supplies rate-of-gain figures on bulls on official test.

We started following these calves on the C. H. Codding and Son ranch. Here Charles checks identification of a calf from a performance-tested bull. Records are no good unless a positive record is made and kept on each animal. Ear tags and tattoos are used.

The Coddings are interested in not only weight-for-age records, but carcass information such as dressing percentage, grade, and loin-eye area.

Photographs: Pease; Hawks



Feeders were shipped from ranch and sold at auction to the highest bidder. Auction was held at the Buena Vista County fairground in October. This pen of five steers was bought by Stanley Sievers, one of the 4-H boys in the cattle-feeders project.

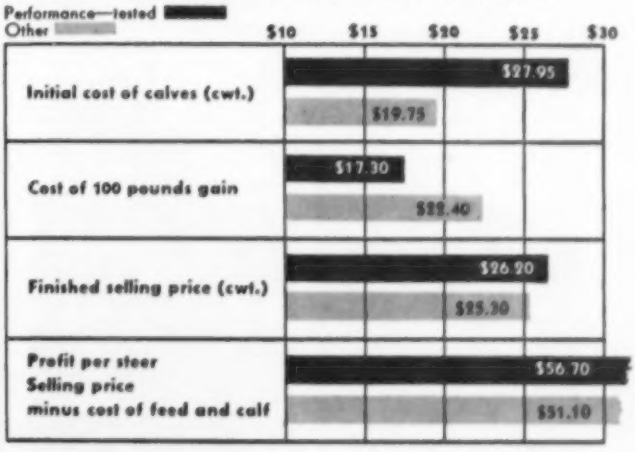
The performance-tested cattle were purchased at the average cost of $27.95 as compared to a $19.75 average for the other feeder cattle in the project.

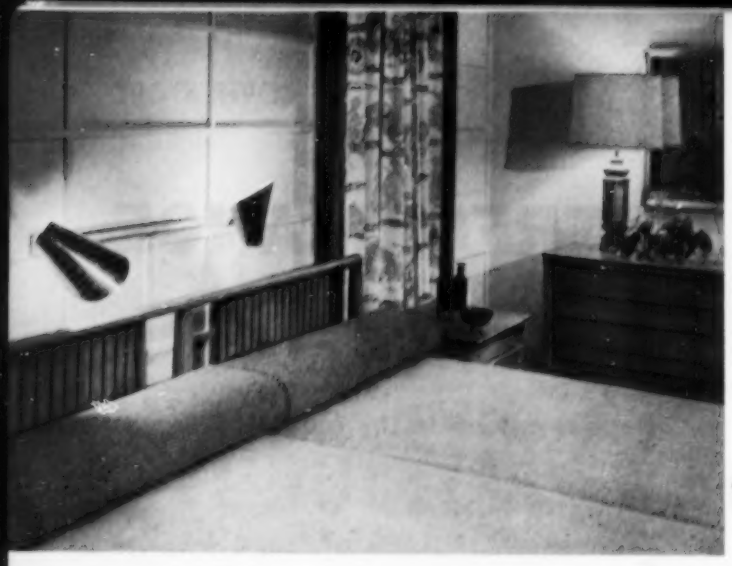
Cattle were sold to highest bidder the following August at the Buena Vista County Fair. All cattle in feeder project were first graded by a committee of three (grading cattle shown on cover).

In spite of a $41 per head handicap in initial cost, "profit per steer" on performance-tested cattle was $5.60 greater than average for other feeders. Difference was lower cost of gain, higher selling price.

Dressed carcasses were observed in cooler. Thirteen head graded Prime and 16 Choice. Average loin length was 17.1 inches; average loin-eye area was 12.26 square inches; average size of loin-eye strip (length X area) was 209.6 inches; average back-fat thickness was 1.04 inches.

Here is a summary of all cattle in feeder project:





Try pulldown lamps if you're tired of knocking over bedside lamps in the dark. They are adjustable to any level, are decorative, and give adequate light for bedtime reading.

Another solution for bedroom lighting which eliminates need for bedside tables is brass pin-up lamps like these. Adjustable shades make it possible to have direct or indirect lighting. The sleek, simple style goes well with the Contemporary furniture.

SUCCESSFUL FARMING'S HOME DECORATING PLAN NO. 7

Light for comfortable living

By Polly Meads

Photographs: Hedrich-Blessing. Drawings: Lindborg

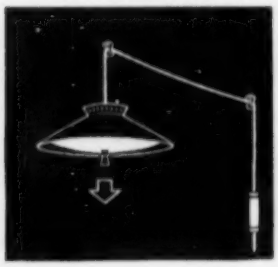
Lamps are an important part of your decorating. More than just looking pretty, they must give the right amount of light to a certain area for a definite purpose. Here are tips to guide you in planning.

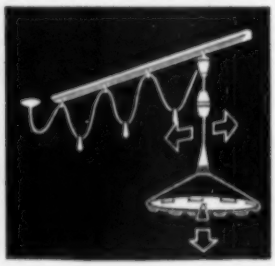
Style. Whatever your choice in furnishings, there is a style of lamp to go with it. Pewter, copper, or fruitwood bases go well with Provincial. Porcelain, brass, crystal follow Traditional lines. Ceramic, brass, wood, or leather are happy with Contemporary furniture in a room.

Height. This is your most important consideration. Small lamps with 50-watt bulbs for reading only invite the eye doctor! Proper height of a table lamp for reading is 39 to 42 inches from bottom of lamp shade to floor. So measure your table height before shopping. Floor lamps should be 48 inches from floor. Hang wall lamps so lower edge of shade is approximately 48 inches from floor.

Distribution. Easiest solution is to have a lamp or light every place you need one . . . for reading, television, music, make-up, and other activities.

Hanging lamp in dining room gives good lighting for eating, creates soft atmosphere, can be pulled up when not in use, allowing for flexible furniture arrangement. Drawings show how fixture can be installed on track, with pulleys, or as permanent ceiling installation.





Desk lamp like this with swinging arm is perfect for this area. Gives good light for writing or work, swings around and serves as reading light for chair.

Light up a corner on a porch or den with a pulldown lantern-type lamp like this. The shade is plastic and Contemporary style goes well with furnishings. The light adjusts to any height and is easy to install.

Wall lamps and floor lamps should both be approximately same height from floor to bottom of shade, about 48 inches.

Wall light by desk can be pulled out or pushed back to wall. Floor lamp by chair is about the same height. Style of both lamps goes with furniture.

Early American style floor lamp goes well with paneled wall and maple desk in this den area.

Floor lamp serves desk and the chair for reading, too. Height is right — 48 inches from floor. Lamp has swinging arm which makes it adjustable without moving base.

Double-purpose floor lamp can be adjusted to maximum height of 66½ inches, or lowered to a minimum of 42 inches.

This lamp, with polished brass base and smart white shade, can go anywhere in a room. It can be used as floor lamp or, if lowered, can be used as table lamp.

Matching lamps, used on buffet, can be perfect for dining rooms. They give a soft atmosphere-light. With 3-way switches, light is adjustable from low to high. Lamps add decorative touch.

Pair of lamps on end tables by sofa is wise choice. They complete furniture grouping, blend well with Traditional furniture, and are correct height for reading, over-all height being about 32 inches.

Efficiency needn't be expensive

Materials Handling
Make It a System

The annual labor requirements for the Harry Roth poultry operation are only 22 hours per 100 hens per year. The national average—over 200 hours. These tips will help you, too, make a business out of producing eggs

Photographs: Pease

Roth converted structurally sound livestock barn into 4-story laying house. It provides 5,600 square feet of floor space. Out-of-pocket conversion costs were $2,009 for structural work, $664 for electrical work, $3,800 for equipment. Chores are mechanized.

By Vernon Schneider

The Harry Roth family operates a 160-acre farm near Forrest, Illinois. It is located in the center of the cash-grain area. *Their problem:* How to obtain a suitable income on a cash-grain farm of this size. *Their answer:* Specialize in egg production.

Today the Roths have built up a flock of about 4,000 hens. About half of the laying flock are housed in the converted livestock barn shown above, the others in a one-story laying house.

Harry and his son together supply most of the labor, equivalent to about 9,200 direct hours on crops and poultry. Laborsaving ideas (many shown on these pages) have enabled this farm family to increase production per man in order to maintain an income that competes with other endeavors.

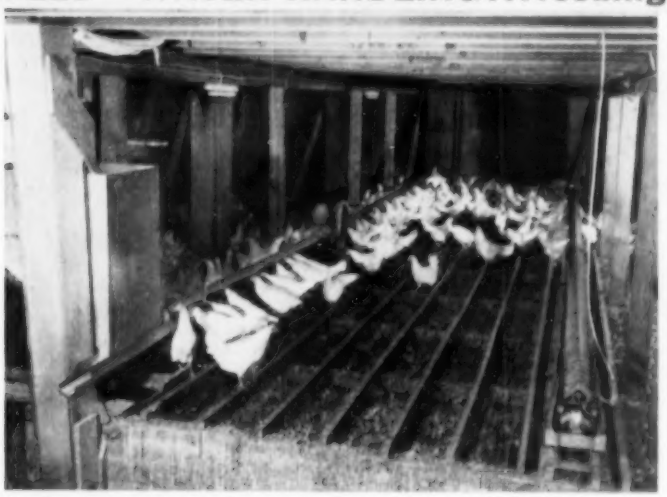
Labor reduction has been exceptional on this farm. Daily chores average only 36 minutes per 1,000 hens per day. This figures about 22 hours per 100 birds per year plus about 4 hours for periodic chores. This is about 10 percent of the labor input on the average Midwest farm with an average small flock.

Farm-grown grain, purchased supplement are processed at a feed mill. Tractor-powered, self-unloading wagon delivers feed into 40-foot auger.

Auger takes feed to a storage bin on 4th floor (drawing at left). Bin holds 2 tons feed—enough for a week. Auger is electrically driven. Corncobs for litter are in the storage bin at right.

Hoppers of mechanical feeders on each floor are serviced by chute from storage bin on the 4th floor. The hoppers are checked daily.

FEED—WATER HANDLING... *feeding—watering—storage*



Mechanical feeders and automatic waterers are mounted over droppings pit on each floor. Center roost section can be raised for easy cleaning. Tractor equipment is used to clean the first floor. Litter from the upper two floors is dropped to the first floor through openings in the bottom of the droppings pit.

Specially constructed screened platforms are suitable alternate to placing waterers over droppings pit. Guards over troughs keep trash out of water and keep the maintenance labor to a minimum.

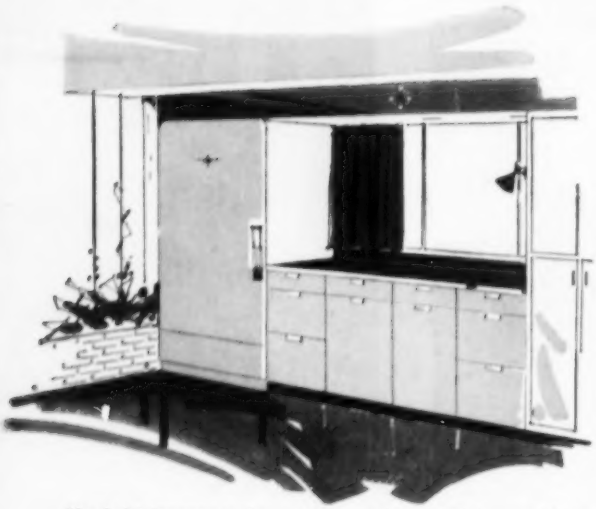
EGG HANDLING... *gathering—washing—packing*

Individual roll-away nests are concentrated in a darkened area adjacent to egg room on Roth farm. Concentrating nests saves steps in gathering eggs. Proper management of flock and house area almost ends the problem of floor eggs. Screens at top of nests keep hens from roosting there.

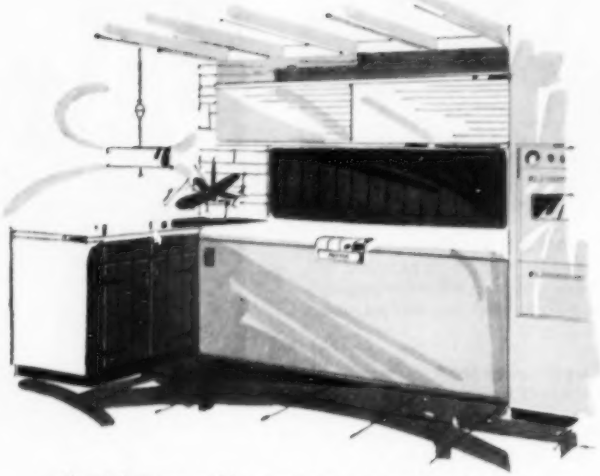
Eggs are washed 3 minutes in a mechanical egg washer immediately after gathering. Water contains detergent-sanitizing agent. Eggs are dried, cooled before packing. Egg room is insulated, refrigerated.

More pictures on page 84

Drawings: Whitaker-Guernsey



Upright freezer in this center is combined with base cabinets. A utility cabinet and a window, substituted for wall cabinets, make way for cooler working conditions and natural light.



Chest freezer and base cabinet, meeting at right angles, save most floor space. Wall cabinets above freezer are high enough to clear opened lid. Detailed storage ideas are shown below.

Give yourself a center for assembly-line freezing

By Nancy Lusk

Freezers are appliances of convenience—to preserve farm-produced and other foods. For most economical usage, keep a volume of food passing through. That's the plea of foods and equipment people.

As a result, you've found more and more uses for the freezer. Freezing prepared foods baked in big batches is common practice. In addition to seasonal jobs, freezing is an any-day project.

For a center, locate freezer in or near the kitchen. Add a few cabinets, giving ample space to cool and package food. A combination of base and wall cabinets adds greatest convenience. The 2 centers shown are designed for rapid assembly-line freezing.

Dispenser for freezer wrapping material was made by local tinsmith, installed in wall. Rolls are 18 to 22 inches wide, dispenser is size to take any width up to maximum. Laminated paper, foil, and plastic are used here.

Freezer carton lids separated from cartons into divided drawer of a base cabinet saves time. One tier of drawers in base cabinet makes handiest storage for small items.

Freezer cartons of all sizes and types are always on hand. Prepared food containers are at right, fruit and vegetable cartons at the left. Plastic cartons are now made in colors and more and more cartons for specialized foods are available.

Photographs: Stanley

Plastic bags are separated by size in this base-cabinet drawer by dividers cut from sheet plastic. Sheets, in gauges starting at 1/16 inch, can be purchased from plastic dealers. Cut to the proper size with hacksaw.

Souper Snack—Lazy Susan Style

When folks drop in—it's nice to offer something warm and welcome. So make it a souper snack! Neighborly, delicious Campbell's Chicken Noodle Soup—a friendly soup that says I'm glad you're here. Taste the golden chicken broth, noodles as light as those you'd cook yourself, and tender pieces of chicken. That's the kind of chicken soup everybody likes.

Isn't it good to have soup ready in only 4 minutes? Much nicer to spend time visiting instead of cooking. Serve Campbell's Chicken Noodle Soup!

SOUPS SUPPLY BASIC NUTRITIONAL NEEDS:
Vitamins, Minerals and Liquids—for general well-being
Proteins—for upkeep and growth • Carbohydrates—for energy

Once a day...every day...SOUP!

See what a few changes can do? With only minor remodeling this kitchen's more fun to work in than the day it was new. Gay colors are its most obvious assets. The scheme came from the wallpaper. From it are selected yellow, turquoise, and brown.

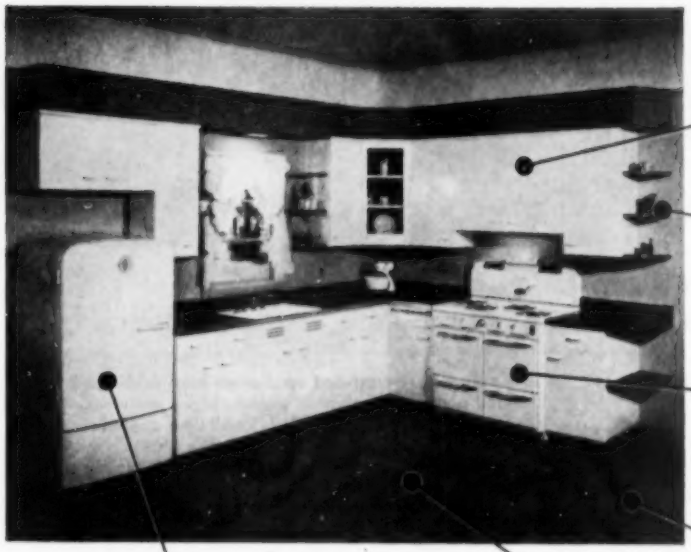
Photographs: Warren Reynolds

Bright orange is the accent color. Flowers, curtains, and accessories present the accent. Warmth of yellow and brown are balanced by boldness of turquoise (a cool color). Bright colors used correctly give this kitchen a cheerful, refreshing look.

New look for a middle-aged kitchen

This brightened-up kitchen has eye appeal. Redecorating and spray-painted cabinets did the trick. New equipment was also added to provide greater convenience and extra storage

By Ruth Krustev



White steel cabinets, good as new, were spray-painted for added color and a modern appearance. (See your local painter with spray-painting equipment for prices.) New knobs were obtained from cabinet dealer.

Whatnot shelves, more item-catching than eyecatching, cluttered kitchen. Shelves came down. A breakfast bar planning desk replaced lower shelves; curtains, upper shelves. Results? See left top photograph.

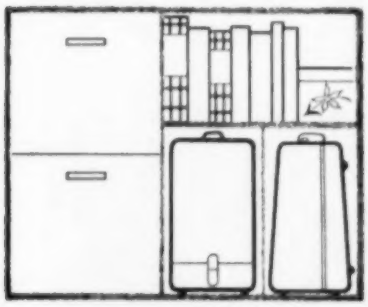
Storage was skimpy. Space under the new counter-top range added some storage. Other cabinets were fitted with space-stretching accessories similar to those shown in drawings below. Check drawings for how-to ideas.

Work space was limited. The breakfast bar, really a multipurpose center, was added. (See color photograph at lower left.) It's a planning center, sewing table, landing counter for oven foods, snack and breakfast bar.

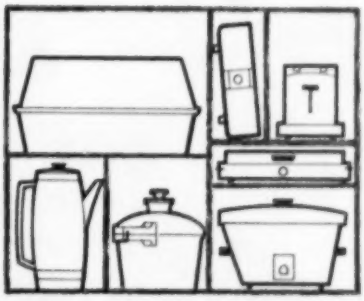
Refrigerator and range, long and faithful servants, were replaced. Counter-top range, separate oven, and new refrigerator were installed. They were chosen in color. Wall cabinets were spray-painted to match.

Floor covering, pattern worn thin, was ugly and hard to tend. New long-wearing resilient floor was put down, carefully selected to blend with color scheme. Color photographs show how color was coordinated.

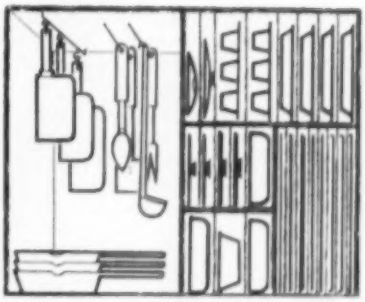
Dividers and accessories make stored items easy to reach with one hand



Cabinet under new range had 3 possibilities. Handy to planning desk, it could hold 2 standard-size files, the portable typewriter, the sewing machine, recipe books, and file.



Cabinet is also handy for small appliances near dining table, breakfast bar. Roaster, frying pan, toaster, waffle baker, coffeepot, saucepan, deep-fat fryer all have own space.



Near range and oven, cabinet may be stocked as seen above. Two sets of pull-out hooks hold pans, cookware. Dividers separate lids, muffin and pie tins, baking dishes.

Plastic-handled kitchen tools are safe in dishwasher, chipproof. Stainless-steel measuring cups, balanced for no tipping, melt, measure in one. Long-handled measuring spoons reach into containers. Cutlery hangs near point of use. Plastic measuring cup is 2 in 1. Triple sifter has copper finish. Cooky dropper frees 1 hand. Mixing bowls bake, too.

Top-of-range cooking features aluminum with colored easy-to-clean exterior, or copper-colored lids. Stainless steel offers copper- or aluminum-clad bottoms. Cast iron has porcelain inside and out. All items have in-oven pieces. (Note aluminum casserole with stand.)

Cook-where-you-eat appliances have added colored porcelain to chrome, copper. More manufacturers offer 1-plug-in heat controls for all their appliances.

Trend—eliminate wasted space. The smaller appliances hold more. Plug-ins do more things. (Waffle baker has extra or reversible grids for grilling.)

Colorful, handy kitchen helpers

By Jan Maple

Take time to browse housewares counters next time you're shopping. They're alive with color—your first impression. Look closer! See how designer, home economist, and engineer combined thinking. In addition to handling foods with flattery, housewares are multipurpose, easy to keep clean, created from materials for lasting beauty—with a touch of elegance.

You'll see cast iron and aluminum covered with heat- and dishwasherproof colored porcelain enamel; glass baking and serving dishes in color—often with keep-warm stands and candles; shapes that depart from the Traditional on occasion designed for multipurpose use.

This array of housewares, representing recent trends, is basic for the modern kitchens. The various lists will help you choose gifts your friends will appreciate and suggest items for your kitchen.

Motored mixers add extras. Blender motor pictured has a juicer-slicer attachment. It comes in colors, white, or chrome.

Meat grinder's motor is also for mixer, blender, juicer, a knife sharpener. Motor can be built in base.

Portable mixers can be had with beater ejectors and speeds comparable to standard-size models.

Photographs: Hopkins

Bake ware offers much variety. Glass is in color. More china, porcelain, crockery are ovenproof.

Metals enameled in color come in many shapes, sizes. Refrigerator dishes, stainless steel and glass, go from refrigerator or freezer, to oven, to table. Some metal pans are silicone-treated to stop food sticking.

Raspberry Ice Cream (Makes 2 quarts)

- 2 cups heavy cream
- 2 cups milk
- 1½ cups sugar
- 3 beaten eggs
- 2½ teaspoons vanilla
- 2 1-ounce packages raspberry-flavored summer drink powder
- Raspberries for garnish, if desired

Combine cream and milk; add sugar, eggs, and vanilla. Stir in raspberry-flavored summer drink powder. Pour into freezer tray and freeze till mushy; turn into chilled bowl and beat smooth with rotary or electric beater; return to tray; freeze firm. Serve with raspberries.—*Mary Ellen Longwood, North Dakota.*

Black Walnut Ice Cream (Makes 1 quart)

- ½ cup sugar
- ¼ teaspoon salt
- 1 cup milk
- 2 beaten eggs
- 1 cup heavy cream, whipped
- ½ cup chopped black walnuts
- 1 teaspoon vanilla

Combine sugar, salt, and milk. Fold eggs into whipped cream; add milk mixture, walnuts, vanilla. Pour into freezing tray and freeze till firm. Break into chunks in chilled bowl and beat till smooth; return to tray and freeze till firm.—*Mrs. Jo Hershline, Indiana.*

Banana Peach Ice Cream
(Makes 1½ quarts)

- 1 cup mashed bananas
- 1 cup fresh, frozen, or canned peaches, drained and finely chopped
- ¼ cup orange juice
- ½ cup sugar
- ¼ teaspoon salt
- 1 beaten egg
- ½ cup milk
- ½ teaspoon almond extract
- 1 cup heavy cream, whipped

Combine bananas, peaches, orange juice, sugar, and salt. Combine egg, milk, and almond extract. Add to fruit mixture; mix well. Pour into refrigerator tray. Freeze till firm. Break in chunks; turn into chilled bowl. Beat with electric or rotary beater till fluffy and smooth. Fold in whipped cream. Return to freezer tray. Freeze until firm.—*Mrs. Fred Reich, Oregon.*

SUCCESSFUL RECIPES Tested in Successful Farming's Tasting-Test Kitchen

Photographs: Stanley

Cranberry Apple Punch
(Makes 8 servings)

- 1 16-ounce bottle cranberry juice cocktail, chilled
- 2 cups apple juice, chilled
- 1 6-ounce can frozen lemonade concentrate
- 2 7-ounce bottles ginger ale, chilled

Mix chilled cranberry juice cocktail, apple juice, and frozen lemonade concentrate. Add ginger ale. Serve immediately over crushed ice or float ice molds in punch bowl. To make ice molds: Fill fluted individual gelatin molds with water; freeze. Unmold.

Chilly drinks

Cool off with icy fruit-flavored drinks. These recipes provide a variety of refreshing perk-ups for hot August days

Cut out these recipe pages and file them in your favorite cook book

Grape Lime Refresher
(Makes 2½ quarts)

2 6-ounce cans frozen grape juice concentrate
¼ cup lime juice
1 quart cold water
1 quart chilled ginger ale
Lime slices

Mix together grape juice, lime juice, and water in pitcher; stir in ginger ale just before serving. Serve in tall glasses over ice cubes with lime slices for garnish. —*Sara D. Merrill, New York.*

Spicy Tea Cooler (Makes 1 quart)

¼ cup sugar
1 quart water
4 tea bags
3 whole cloves
½ small stick cinnamon
¼ cup orange juice
1 tablespoon lemon juice

Combine sugar and water. Heat to boiling, stirring till sugar dissolves. Add the tea bags and spices tied loosely in cheesecloth bag. Remove from heat; cover and steep for 5 minutes. Remove spices and tea bags. Add the orange and lemon juice. Stir till blended. Pour over ice cubes or crushed ice. Serve with orange wedges.—*Bertha Rohrich, Nebraska.*

Orange Sodas (Makes 4 10-ounce glasses)

¼ cup frozen orange juice concentrate, thawed
½ cup light cream
1 pint orange sherbet
2 to 3 7-ounce bottles lemon-lime carbonated drink, chilled

Gradually add orange juice concentrate to cream, mixing well. Divide in 4 10-ounce glasses. Place a scoop of sherbet in each glass; fill with lemon-lime carbonated drink. Serve with straws and spoons.—*Bonnie Terhune, New York.*

SUCCESSFUL RECIPES Tested in Successful Farming's Tasting-Test Kitchen

Cut along dotted lines

Pineapple Freeze (Makes 1 quart)

1 cup milk
¼ pound marshmallows, quartered
Dash salt
1 cup heavy cream, whipped
1 9-ounce can (1 cup) crushed pineapple
Pineapple wedges

Scald milk; add marshmallows and salt. Stir till marshmallows are dissolved; cool. Fold in whipped cream and crushed pineapple. Turn into a refrigerator tray and freeze till firm. Spoon into serving dishes and garnish with pineapple wedges before serving, if desired.—*Mrs. Jo Hershline, Indiana.*

Homemade ice cream

You can freeze smooth and delicious homemade ice cream in your refrigerator. Choose from these easy-to-do recipes

Now! Wash away "new perm" frizz and odor!

NEW! Quick! The prettiest wave in the world leaves your hair instantly shampoo-fresh!

Takes ½ the time, ½ the work!

New! The only wave you dare wash at once!
Only Richard Hudnut's new Quick has Crystal Clear Lanolized Lotion. A lotion so pure yet penetrating, you can wave without washing first—and shampoo right after you wave! So easy! When your wave is finished, you shampoo instead of rinsing. No need to wait a week to wash away "new perm" frizz and odor. No fear you'll wash out or weaken your wave. It's locked right in with Crystal Clear Lotion!

So quick! Wave and wash with ½ the work!
Quick's the quickest! Only Quick's exclusive Crystal Clear Lotion penetrates so fast it lets you wrap more hair on each curler and still get a firm curl to the tips of your hair. So you get a complete new-style wave with just 20 curlers—½ the winding time—½ the waving work! Shampoo instead of rinsing and, from the first minute, your new Quick wave is lanolin-soft, sweet to be near. Use Quick today—be shampoo-fresh tonight!

2 new-style waves for the price of 1
Crystal Clear Lotion can be recapped. Use ½—Save ½.
$2.00 plus tax. 1 wave size, $1.25 plus tax.

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It's Easy to Raise Cattle for PROFIT in GEORGIA

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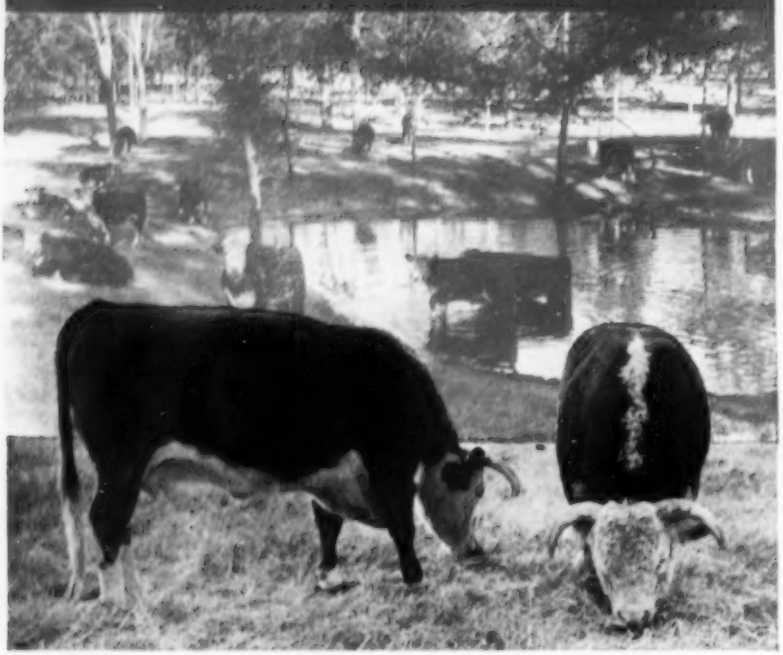
★ Easy transportation



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Because of Georgia's demand for lighter weight slaughter steers and heifers, cattle are brought to prime market condition in a shorter period of time than in other areas. With well established markets throughout the state, weight losses in shipment are cut to a minimum — bringing more profit to you.

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CITY_____ STATE_____

Farm programs

From page 37

developments still to be put to work, we've increased yields tremendously.

Corn yields went from the 1945-54 average of 37 bushels per acre, to 41 in 1955 and 45.4 in 1956.

Wheat went from the 10-year average of 12.6 bushels to 15 in 1955 and 17.2 in 1956.

Cotton yields, the third of the three "surpluses," doubled.

● Tight allotments and the soil bank have forced us to adopt new techniques *faster* than we normally might have. In order to maintain or increase income on fewer acres at lower prices, good business sense called for more intensive farming on remaining land and buying or renting additional land for greater equipment efficiency. This meant more fertilizer, more machinery, better seed varieties, and other production boosters.

● To control surplus production, the government has put more emphasis on lowering price support than on the direct production controls. The U.S.D.A. never did try the one control device which every economist said would work: cross compliance. Benson did put on total acreage allotments once but backed away before they went into effect. Significantly, Benson says: "It is my hope that ultimately flexible supports will be able to effect all the production adjustment necessary."

● National farm organizations, who are supposed to guide both Congress and the U.S.D.A. on farm needs, have fallen down on the job. They spend more time bickering among themselves than fighting together for the farmers. National officials of Farm Bureau, only organization Benson listens to, is out for removal of support floors. Farmers Union will give in to nothing less than 100-percent-of-parity support.

> **Every once in a while we think of the hardships of the early pioneers who had to start their automobiles with a crank.** —*Herbert Victor.*

Leaders of both organizations propagandize members with their extreme viewpoints. Many farm leaders in Congress question whether either honestly speaks for its own membership in farm policy matters—or whether membership is largely the by-product of a quest for cheaper insurance and fertilizer.

● Politics is strong both in writing the farm laws and in running them. One of the main things which defeated a badly needed new corn program in Congress this year was political jealousy—Southerners heard that Midwesterners got most of the 1956 acreage reserve money.

At U.S.D.A., Benson increased price support for 7 major crops in 1956, an election year (oats, barley, rye, sorghum, soybeans, flaxseed, and cottonseed), for

no provable economic reason—and lowered them again in 1957.

● Farmers themselves are not united about what kind of program they want. Not only that, but many break the very rules set up for their mutual benefit.

Where are we now? Visiting Washington, you have the sinking feeling that all is lost and you're standing in the midst of shambles. While it's not as bad as all that, it is serious. Here's the picture:

City folks are having more say about the kind of programs farmers get while the farm vote is less of a factor. Until recently, city lawmakers generally went along with farm legislation as a matter of party policy. But now many metropolitan legislators are bolting party lines to vote against the farmer. Farm representatives are terribly outnumbered. City opposition was the biggest single factor in the House vote to kill the acreage reserve and played a strong part in defeating corn legislation this year.

The "Farm Bloc," which has written and defended farm legislation over the past 25 years, is shattered like never before. Much of the severe split is on a personal basis between leaders from the various farming regions. They are not pulling together for the common farm good. This makes it easier for Congressmen from cities to "meat ax" the farm programs.

Congress-Benson feud of the past few years has boiled down to a feud between the secretary and most members of the split "Farm Bloc." This is more than offset by new friendships Benson finds among city lawmakers. He has more supporters from city districts than he has from farm districts. His opposition to farm-support programs has jelled "city bloc" support behind him. His position is the green light to whack away at programs. If the secretary of agriculture himself says the programs are too expensive and no good, they reason, we'll go along with him and cut them out. It's a perfec setup for city legislators eyeing the next election to build popularity among their city constituents.

Where do we go from here? While it looks black now, all is not hopeless. Out of the wreck new programs are likely to develop. What they will be depends upon many factors—including what the farmer himself does about it. As of now, there are three choices:

> **One of the things we have to be thankful for is that we don't get as much government as we pay for.**
> —*Charles F. Kettering.*

1. Continuation of flexible supports in the 75-90 percent-of-parity range—with patches. The changes might be to give the secretary more leeway within that range to set support levels. If he gets nothing else, Benson wants to eliminate the formula which shoves supports back to 90 percent when supplies go down.

2. Free market with full flexibility—the Benson Plan. The secretary says this has the "greater merit." Benson has asked Congress for almost blank-check powers to set supports for basics anywhere from 0 to 90 percent of parity—although he promises not to reduce supports below 50 percent of parity. He also wants greater discretionary power to set allotments.

3. The commodity-by-commodity approach. This method is perhaps the best long-range bet. If so, it could mean compensatory payments for one crop, flexible supports for another, two-price plan for still another, and so on. The chances for this are getting better.

In August, the new National Federation of Commodity Organizations holds its second meeting. At that time, more than a dozen commodity organizations will bring together their proposals for individual crop programs to be pushed in Congress.

Purpose of the new group is to get separate commodity organizations to work as a team in solving their problems. Thinking is that each organization knows the problems of its members best and what they want done.

Next month, a veteran Washington observer and farm policy expert explains the "why" of the farm program breakdown.

Save production dollars with this all-purpose Armco Steel Building

This all-season, all-around building is truly an economical farm tool. *It need never stand idle.*

It is rodent-proof and weathertight—ideal for grain storage. No lining required.

It can also be adapted for drying simply by laying a perforated steel floor on concrete blocks. After drying, grain is stored in bins at one end of the building. Then, by removing the drying floor, the remainder of the building is free for machinery storage, livestock shelter, or other purposes.

Armco Steel Buildings are rigidly constructed to withstand wind and snow loading. There's nothing in them to rot, warp or crack—*and they're noncombustible.*

Armco Steel Buildings are rigid in construction but flexible in the many jobs they can do for you on the farm.

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...and I knew I had to make it the best, most up-to-date product at the lowest possible price. Otherwise, people would start buying somebody else's product. I can't risk my business by making anything but the best."

"I SOLD-IT

DEALER

...and I knew it would live up to its claims, because it's made a good name for itself. I don't like to sell unproved, untried products that may not satisfy customers. Satisfied customers build my business."

"I BOUGHT IT

CUSTOMER

...because I knew the name, knew it would be just what I wanted. I usually get the best selection, the newest improvements, and the real values when I stick to advertised brands. And I save time, too."

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ARE NAMES YOU CAN TRUST!

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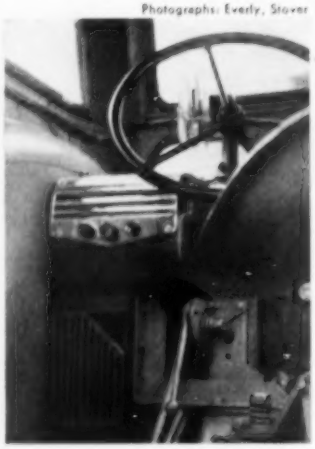
Kenneth Peters, Barton County, Kansas, added a cooler to his cab . . .

Photographs: Everly, Stover



A 3-ton automobile air conditioning unit was installed in this tractor cab with all air being drawn in through a filter. Cab is partially insulated. In the picture, a heater is shown mounted above the air conditioning unit, thus providing year-round comfort.

The compressor is operated with a V-belt drive from the pulley wheel. The condenser is located behind radiator grill where the fan will cool it easily. Peters says it's a pleasure to operate this unit on hot days.

Air conditioners cool tractor cabs

Leon Rahn, Douglas County, Illinois, designed own cab . . .

Living-room comfort is built into this cab, too. The evaporator is on the dash for cooling the cab, the condenser is between the radiator and grill, and the compressor is on the side of the tractor, as shown, driven by the belt pulley.

Cab design is such that Rahn can see both the inside and outside rows of a 4-row cultivator. It's a frame made of 1½" pipe, aluminum covering, and shatterproof glass. Wind and dust are kept out.

The 12-gauge aluminum cab has been insulated with glass wool. It's mounted on 3"x5" pieces of tire casing to make it quiet. Metal cab does not contact tractor.

The 3-section rear door slides up tracks to a position under the roof.

Acres are GROWING MORE today!

OIL FILTERS

The United States Department of Agriculture reports a 25% increase in cropland yield during the past 17 years. Now, the average American farm worker must be more efficient to bring in this added abundance at harvest time.

To increase his efficiency to meet modern agricultural standards, the farm worker must use mechanized equipment —cars, trucks, tractors, power implements and stationary engines—well maintained to do his work during harvesting.

So, follow the manufacturers' recommendations on the upkeep of all farm engines, including the changing of oil filters. When you do change them, be sure to use AC Oil Filters . . . they remove particles of dirt, dust, grit and bits of metal as small as 1/100,000th of an inch that can cause costly, time-consuming repairs at the critical harvest season.

Get AC Oil Filters for all of your farm engines from your nearby AC supplier TODAY!

AC SPARK PLUG THE ELECTRONICS DIVISION OF GENERAL MOTORS

FOR CARS TRUCKS TRACTORS AND POWER IMPLEMENTS

you get MORE out of farming

with ALCOA aluminum

FASTER GAINS with pigs,

FOR EXAMPLE!

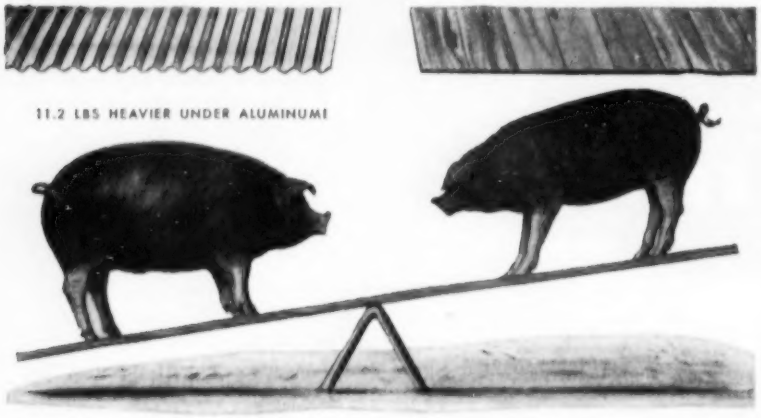
Your pigs will gain faster on less feed when Alcoa® Aluminum Roofing and Siding protects them from summer heat.

In recent tests by Iowa State University, pigs housed under corrugated, embossed aluminum roofing gained 11.2 pounds more in eight weeks than pigs under roofs of other materials. And they made their gains on 17.1 fewer pounds of feed!

The fast-gaining pigs in the aluminum houses were part of a group of 72 tested in nine different houses—three roofed with aluminum, three with another metal, and three with a different type material. All pigs were fed, watered and treated the same.

Daytime temperatures in the aluminum units were noticeably lower than under the other two kinds of roofing, the researchers reported. "Lower daytime temperatures tended to increase feed efficiency by stimulating appetites," they stated.

You can get top pig gains by roofing your swine houses with Alcoa Aluminum. Available at your lumberyard or farm supply dealer's in lap-saving 48-inch or standard 26-inch sheets. Alcoa Aluminum Roofing is corrosion resistant, will not rot. Never needs painting. Stays put, even in winds of hurricane force, when applied properly with screw-shank Alcoa Aluminum Nails.



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Address _____ ☐ Dealer
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Make equipment fit

From page 40

Wet-corn bin (looking up from below) has sloping bottom. Double ½" cables at each corner support it from 2 beams across top of silo. Each beam is made of four 2x10s.

starts field shelling. His system is arranged so he can do almost everything himself. The first thing he does in the morning is to start the dryer to dry the batch left in it overnight. After breakfast he greases the picker-sheller while the dryer is cooling the corn, then shuts off the dryer and goes out to pick. Mrs. Brandley dumps the corn into the pit, then elevates it to storage. By the time Brandley is ready to dump wet corn into the pit, the pit is empty.

As the newly picked corn is dumped, it's elevated to the wet corn bin in the silo and allowed to run through into the dryer. When the dryer is filled, the corn is held in the wet-corn bin.

After supper, Brandley starts the dryer for drying the second 375-bushel batch. When it's dry, he empties dry corn into the pit and refills the dryer with corn from the wet-corn bin. This corn stays in the dryer until the next morning. Then the dry corn is stored and he's in bed by 11 p.m.

Brandley keeps a check on the air temperature as it leaves the dryer. He finds that the grain will be about 13½-percent moisture when the temperature of the air from one spot on the dryer is 130 degrees. For each additional 5 minutes of drying time, the grain dries 1 percent.

Old corncrib was remodeled to hold shelled corn by cable running lengthwise and crossties. Kraft paper is on sides.

You get MUCH MORE than POWER

1

2

3

. . . in a CAT* Diesel Tractor

In each of these three pictures you'll see jobs being done that require *much more than power*. Take a look at the No. 1 plowing picture. Those are *six* 16″ plows the 50 DBHP Cat D4 Tractor is pulling in Kankakee River bottom land. How many plows – and how big – can *you* pull with 50 DBHP on wheels? Obviously, the answer is that you need much more than power to do a big job – you need balanced work power and traction!

Now take a look at No. 2 – the corn picking picture. This was taken in a wet year when a wheel tractor just couldn't have done the job this D4 did! It got the corn out at the peak of the market season. Yes, you get much more than just *power* when you own a Cat Diesel Tractor – almost twice the useable push-pull work power of ordinary tractors!

Picture No. 3 shows a 38 DBHP Cat D2 Tractor bulldozing rock. While this tractor develops about as much rated power as your average size wheel tractor, would you tackle this kind of work with wheels? The D2 can do this and many other jobs because it has *real* work power combined with traction, flotation, ruggedness and versatility.

Capitalize on this bonus work power by seeing your Caterpillar Dealer. Name the date . . . he'll demonstrate! And write us for your free copy of "Tires or tracks . . ." Address Dept. SF87, Caterpillar Tractor Co., Peoria, Ill., U.S.A.

CATERPILLAR*

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CONSERVE SOIL, WATER MANPOWER WITH A CAT DIESEL TRACTOR

Store Shelled Corn Or Soybeans With Complete Safety in BS&B

PERFECTION BINS

BS&B PERFECTION Grain Bins equipped with AERO-DRY and the optional new WEATH-AIR-TROL make it possible for you to *safely* store shelled corn or soybeans through any kind of weather—regardless of moisture content at time of harvest!

This equipment teams up perfectly with modern corn harvesting methods using the new picker-shellers, and enables you to harvest for *maximum yield* and store for *maximum profit* without fear of spoilage. Similarly, you can now combine your soybeans whenever they have reached maturity without waiting for them to dry down to a certain moisture content in the field.

The profitable advantages of being able to harvest at the *right* time . . . and of being able to store your crop *safely* until market prices are at the *top* of their yearly cycle . . . are yours when you equip your farm with BS&B PERFECTION BINS complete with AERO-DRY and WEATH-AIR-TROL!

How Much Does It Cost?

When financed under the self-liquidating ASC loan provisions below, an average sized BS&B PERFECTION BIN with complete AERO-DRY and WEATH-AIR-TROL will cost approximately 14¢ per bushel of storage capacity per year over the full *loan* period. However, when averaged over the 25 year estimated life of this equipment, you can store your grain every year for only about 2¢ per bushel—a small price compared to the *additional net profits* it can bring you!

Here is what you can get under ASC loan provisions on this BS&B PERFECTION equipment:

GRAIN BINS	AERO-DRY SYSTEMS
Up to 80% Loan	Up to 75% Loan
Straight 4% Interest	Straight 4% Interest
5 Years to Repay	4 Years to Repay

WEATH-AIR-TROL provides for constant, fast drying air — even when it's raining: Write for manual.

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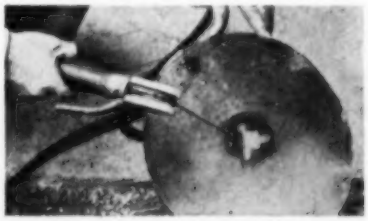
Builds good post anchor

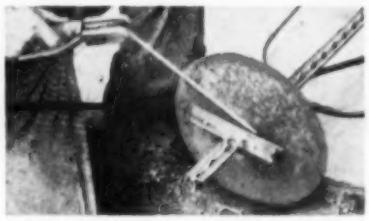
Once buried, a tractor cannot lift this corner-post anchor or "dead man," according to Jeff M. Jennings, Louisa County, Iowa. It will resist fence tension, livestock, and frost heaving.

A blade from a junked disc and a steel post are used for the anchor. Holes are cut in the disc with an electric welder so it will slide over the steel post—then a piece of the post is cut off for a brace and everything is welded as shown.

Holes are dug with a power auger. The anchor is placed with the disc against the side in the brace post hole and an angling trench dug from this to line it up in its permanent position toward the corner post. The brace post is set and the trench filled, then the wires are added and tightened, making a solid job that will hold for years.—*A. M. Wettach.*



Perforations at two of corners and one side of the disc axle hole are burned with welder. You may need four, depending on post.



Cut off about 8" of post to make cross bar for welding beneath disc. Weld it solidly to post, since much of the pull comes against it.

The complete corner post is now ready to be set in the ground. When put in the ground as anchor, the greater the pull, the deeper it tends to bury itself.

Photographs: Author

Another New and Bigger Forward Control 'Jeep' Truck

Here's the bigger, more powerful, 7,000-pound GVW Forward Control 'Jeep' FC-170 Truck:

- **Advanced Forward Control design!** The same new, advanced features that made the Forward Control 'Jeep' FC-150, an immediate success.
- **More cargo space on less wheelbase!** A 9-foot flatbed pickup box on a wheelbase only 103½-inches long! Bed is 27-inches from ground for back-saving ease of loading!
- **More efficient space utilization!** Compare it with any other 4-wheel drive truck – *only* the FC-170 gives you so much cargo space per inch of wheelbase!
- **All-time high for "big-load" maneuverability!** The FC-170 is the *only* 4-wheel drive truck to give you "go-anywhere" 'Jeep' maneuverability with a payload capacity of up to 3500-pounds.
- **Other outstanding features!** It's really a 4-wheel drive truck – *not* a modified 2-wheel drive truck, *not* a conversion! High-torque Hurricane 6-226 engine, time-tested and performance-proved • spacious Safety-View Cab • big wrap-around windshield • wide 63-inch tread for ground-gripping stability in off-road travel • shifts easily into 2-wheel drive for highway travel • with power take-off, operates a wide range of special equipment from winches to belt-driven machinery.

The newest addition to the 4-Wheel-Drive 'Jeep' family...ready for the bigger, tougher jobs!

SPACIOUS SAFETY-VIEW CAB puts you in a "Forward Control" position, gives you greater command of any driving situation.

EXTRA 4-WHEEL-DRIVE 'JEEP' TRACTION takes heavy loads to off-road areas impossible for ordinary vehicles to reach.

'Jeep' Forward Control
4-Wheel-Drive
FC-170

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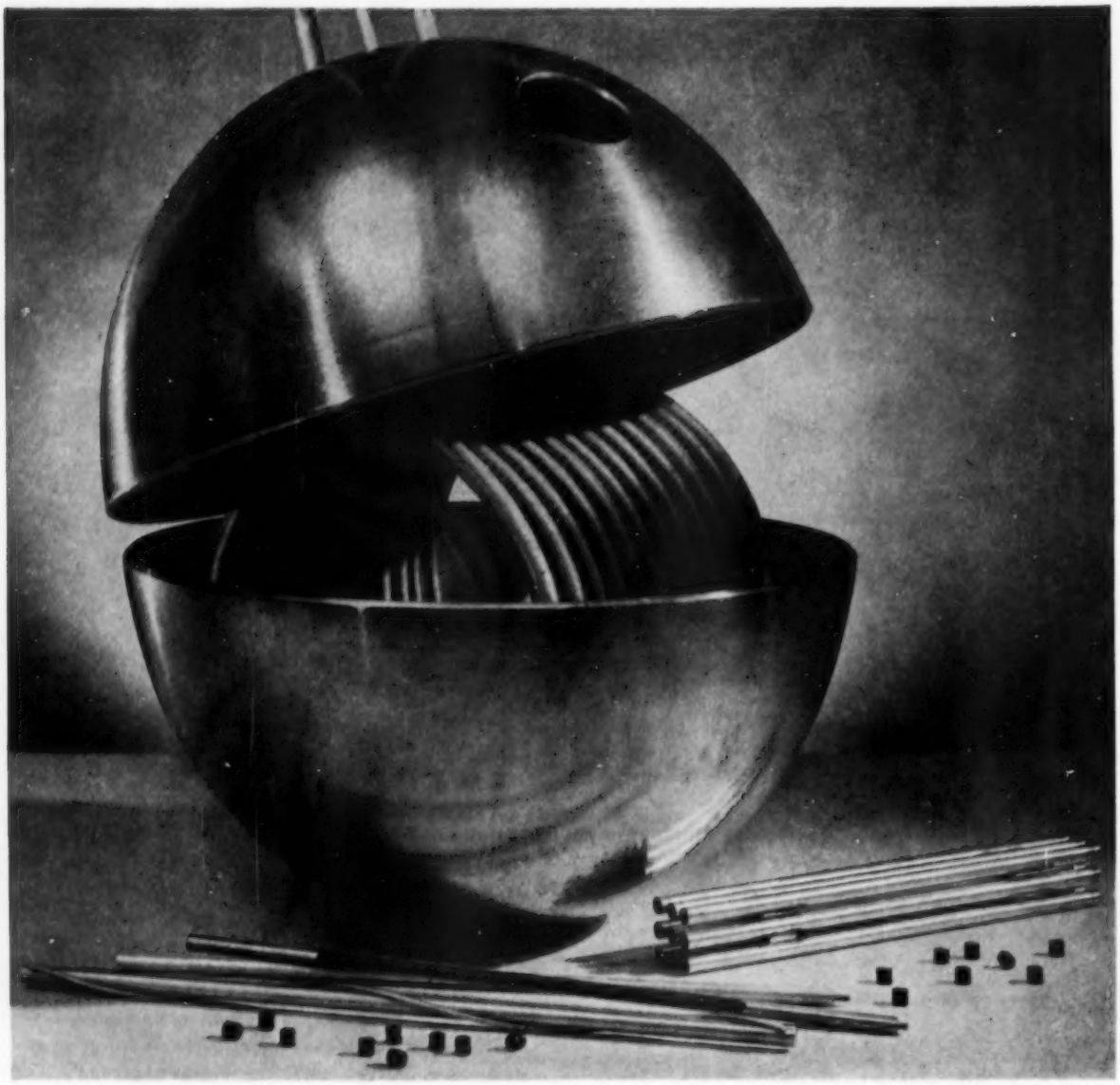


The sphere above is a "core" for one kind of research atomic reactor. The metal tubes in the foreground and at the right show various test designs for holding the small uranium fuel pellets in other kinds of atomic reactors.

Strange new "tools" of atomic-electric power

These are some of the strange new "tools" used to produce, test, or experiment with atomic-electric power. They are among the things that will help bring electricity from the atom.

"Tools" like these are being used in developing several atomic-electric plants now under way. A number of electric light and power companies from many parts of the country are working with each other and with equipment manufacturers and the Atomic Energy Commission to develop the plants.

America's electric light and power companies produce more and more electricity every year, far more than any other nation in the world. And they have helped develop ways to produce it more efficiently year after year. That's why you can expect power companies to continue to do their part to advance the new science of producing electricity from the atom.

America's Electric Light and Power Companies*

**Company names on request through this magazine*

Keep cool in summer

From page 39

by evaporation. This process consists of a window fan blowing outside air through a water-soaked material such as excelsior or another water-absorptive material. The fan pulls air across the surface of this moist substance and is cooled as the water evaporates.

As evaporative cooling tends to increase humidity in the air, this type of cooling is satisfactory only in areas where relative humidity during the summer is low.

Mechanical refrigeration. For summer comfort, regardless of high humidities and high temperatures, the most satisfactory method of home cooling so far developed is by means of an electrically operated refrigeration unit. These are available in individual window-type coolers, called window air conditioners, and also in central air conditioning units large enough to handle an entire home.

They work like this: Air is pulled over a series of cooling coils by means of a fan. These coils cool the air and also remove excess moisture. A filter removes the greater amount of dust and odors. Thus the air coming into the area is cleaned, cooled, and dried.

You can get an idea of the size window unit for your house by using this chart:

Size of unit	Area cooled
½ hp	300-350 sq. ft.
¾ hp	440-510 sq. ft.
1 hp	600-700 sq. ft.
1½ hp	700-950 sq. ft.
2 hp	950-1,100 sq. ft.

New central air conditioning systems now come complete in kits that are installed independently of existing heating systems. This is made possible by a system of lightweight, glass-plastic ducts now available that can be folded and joined into lengths suitable for carrying cool air anywhere in the home. There is no metal to cut or fit and no framing needed to support their weight. Furnace air ducts can also be used for this type of installation.

"Sometimes I think I'd rather fix Sunday dinner by myself."

The cooling units on these systems can be installed anywhere in the cool air duct line that is suitable. If the furnace system duct line is used, an excellent location for the cooling unit is near the furnace. The compressor and condenser for these cooling units require no water, thus can be installed outdoors. These are available in sizes from 2 to 7½-hp units. The average home can be handled with a 3- to 5-hp size.

In installing an air conditioner, any unit of ½ hp or smaller can operate on a regular 115-volt circuit. For units over ½ hp, a 230-volt circuit is best.

Operating cost of refrigerated cooling units, on the average, will vary from $5 to $15 per month for the single window coolers and $20 to $35 per month for the complete home central-location type of refrigerated cooling.

Some units, called heat pumps, are now being built to operate as a cooling unit for the summer and a heating unit during the winter. Such units, completely electrically operated, pump heat from the ground or air in winter to heat the house. Then they reverse the cycle during the summer to pump heat from the house into the air or ground.

Above ground . . . below ground

You need the durability that only flexible pipe made of Du Pont ALATHON® 25 can give

Among the immediate advantages of plastic pipe are its ease of installation, flexibility and lightness in weight. In addition to these advantages pipe made of Du Pont ALATHON 25 affords an extremely important plus . . . DURABILITY.

Specially processed from virgin material, Du Pont ALATHON 25 provides the utmost in strength and durability. Thus pipe made of ALATHON 25 polyethylene resin has higher burst strength . . . withstands top-rated pressures for longer periods . . . is superior in its ability to resist corrosive soil chemicals . . . stands up better under the general rugged use to which farm pipe is subjected.

Assure yourself of extra strength, longer service and greater protection against costly breakdowns. Always look for the green tag with the words "Quality Pipe Made of Du Pont ALATHON 25 polyethylene resin."

DU PONT
REG. U.S. PAT. OFF.
Better Things for Better Living . . . through Chemistry

There is a difference in flexible plastic pipe . . .
specify quality pipe made of ALATHON® 25

Here's how to tell if you have the correct concrete mix

Too dry a mix looks like this. Since there's too much aggregate, add more water and cement in right proportion.

Not enough aggregate is in this mix. Add more. It looks as if more sand in relation to gravel is needed.

This mix is about right. It smooths down easily and is workable and plastic. Never change water-cement ratio.

Photographs: Author

How to make strong concrete

It's amazing how well concrete lasts—even when so much of it is poorly made. Here's information to keep in mind when you make or buy your next batch

By Art Edwards
University of Missouri

Too much water weakens concrete—even though concrete is easier to pour. Engineers agree that 6 gallons per bag is the limit.

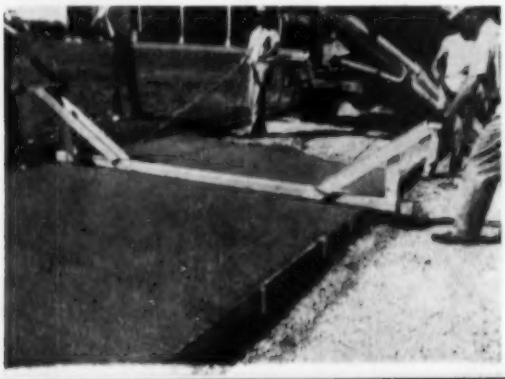
The crushing strength of quality concrete, after 28 days of curing, is 4,700 pounds per square inch. When 7 gallons of water per bag are used, this crushing strength drops to 3,800 pounds per square inch. With 8 gallons the strength is about 50-percent less, or about 3,200 pounds.

But when you really pour the water in and make the concrete easy to work, at rate of 9 gallons, you cut the crushing strength to only 1,800 pounds per square inch. With 10 gallons of water per bag, the effectiveness is practically nil. [*Turn to page 86*

Make a trial batch so you know how much aggregate to use. Put measured amount of water (see text) in mixer, add 2 scoops aggregate to cut cement from sides of mixer, put in half-sack cement (it's a half-sack mixer), then add rest of aggregate until mix is workable. Note the amounts. On succeeding batches you know how much of everything you need.

In placing concrete, keep these things in mind

On paved areas, use 2x4s for forms and a 2x4 for screeding. It takes 2 men to push it back and forth, a third to pull it forward. Ready-mixed concrete is available in many areas.



A bull float is useful. Make one with a handle of 1x2s and float of 1x12s braced at ends.

Spray on curing compound to let the concrete dry slowly. One gallon covers 200 square feet of surface.

FEEDS THAT "TALK"

REVEAL HEALTH AND NUTRITION SECRETS

When a disease or a stress hits your livestock, what specific chemical systems go awry in the body? How does the animal use nutrients to build more meat, eggs and milk?

Atomic energy is the newest, most promising research tool adopted by the feed industry to find answers to these and other important animal-living secrets.

Recently, Pfizer scientists succeeded in "tagging" Terramycin molecules with radioactive atoms. These radioactive molecules of Terramycin are mixed in experimental batches of feed and fed to laboratory animals. Devices similar to uranium Geiger counters are used to trace the path Terramycin takes through the animal's body. In this way, its action on healthy and diseased tissues can be studied.

Scientists know that a few grams of Terramycin in feed help animals make almost unbelievable gains. A few extra grams stop some of your most costly livestock diseases.

Now, with these radioactive tracers they're finding out how Terramycin is able to fight disease and help animals grow at the same time . . . where it is concentrated in the body . . . its action on cell metabolism.

With better knowledge of how Terramycin and the scores of other feed ingredients work, the feed industry will be able to pack even more nutrition, more and more growing, producing and "living" power into your feed bag.

What next from Pfizer and your feed man? Right now they're working with new experimental high level feeds to stop your remaining costly disease problems. And they're approaching the day when you can produce a pound of gain from a pound of feed.

Science Comes to the Farm in a Feed Bag

Pfizer

Pfizer Agricultural Research and Development Department

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CORONADO "DELUXE 15"

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List Price $379.95—SALE PRICE $299.95

Compact storage for 525 pounds of frozen food at zero temperatures. Three full-width door shelves, two juice can dispensers, color-styled lighted interior, sliding basket, Safti-Latch door. 5-year unit and food protection warranty. (44-7735)

	List Price	Sale Price
Coronado "Deluxe 10" Upright Freezer (44-7730)	$299.95	$229.95
Coronado "Deluxe 20" Upright Freezer (44-7740)	$479.95	$359.95

YOUR CHOICE $3.50 PER WEEK PAYABLE MONTHLY

$299.95 • $10.00 DOWN—YOUR TRADE-IN WILL APPLY

CORONADO "CUSTOM DELUXE 15"

CHEST-TYPE FREEZER

List Price $399.95—SALE PRICE $299.95

Easy-loading, big-capacity freezer with such sensational new features as *exclusive* freezer-wrap dispenser, top-mounted temperature control and signal light, 4 ice cube trays, juice rack, tote tray, Safti-Latch lid. Super-efficient "dry wall" construction. 5-year unit and food protection warranty included.

	List Price	Sale Price
Coronado "Custom Deluxe 20" Chest Freezer	$479.95	$359.95

We trade for full value on your trade-in freezer or any other item that is resaleable.

Gambles National August Sale

SPECIAL SAVING ON THE FAMOUS CORONADO

"SUPER 15" CHEST-TYPE FREEZER $249.95

List Price $329.95

$2.90 weekly, payable monthly — $10.00 Down — Your Trade-in Will Apply

Here's big capacity plus low operating cost. The "Super 15" gives you 12.4 cu. ft. of zero storage and a 2.6 cu. ft. fast-freeze compartment; thick Fiberglas insulation; new wide-grip handle; Safti-Latch counterbalanced lid; automatic interior light. Guaranteed 5 full years; $250 food protection warranty.

CORONADO "Super 10" Chest Freezer • List $279.95 • Sale Price $219.95
CORONADO "Super 20" Chest Freezer • List $399.95 • Sale Price $299.95

Any Resaleable Merchandise Accepted for Trade-in

How to find the least-cost source of

TDN*

*Total digestible nutrients (TDN) is the sum of all the digestible organic nutrients in feed. These include protein, fat, and carbohydrates (fiber and nitrogen-free extract). Together they supply the heat and energy needed by the animal

Livestock raisers, dairymen, and poultrymen have a choice of several feeds to make up an animal's ration. The feeds used to make up these rations vary in price from time to time. However, price is not the only means of determining actual cost of various feeds. You must also consider comparative energy values.

Finding the cheapest source of TDN can mean a real saving in feed costs. The chart at right will help you find the least-cost source of TDN by comparing the cost of 100 pounds of TDN from different sources.

Listed at the right above are the three classes of feed—high protein, medium protein, and low protein. Instructions below tell how to use this information to select the feeds that will supply nutrients at the least cost.

Here's how it works

- From the list at upper right, select the feeds on which you want to compare prices.
- Find the code number for each feed from this list.
- Find the same code number on the chart at right.
- Figure out the price per ton of feeds you want to compare (use closest figure in left-hand column).
- Find the cost per 100 pounds of TDN of the feeds you are comparing.
- Compare the two prices—select the feed with the lowest price to use in ration.

EXAMPLE

FEED	PRICE PER TON	INDEX NUMBER	COST PER 100# TDN
SBOM	$50.00	5	$3.25
LSOM	$63.00	7	$4.45

COST OF FEED PER TON	COST OF 100 POUND			
	1	2	3	4
$25	$1.47	$1.51	$1.54	$1.
$30	1.76	1.81	1.85	1.
$35	2.06	2.11	2.16	2.
$40	2.35	2.41	2.47	2.
$45	2.65	2.71	2.78	2.
$50	2.94	3.01	3.09	3.
$55	3.24	3.31	3.40	3.
$60	3.53	3.61	3.70	3.
$65	3.82	3.92	4.01	4.
$70	4.12	4.22	4.32	4.
$75	4.41	4.52	4.63	4.
$80	4.71	4.82	4.94	5.
$85	5.00	5.12	5.25	5.
$90	5.29	5.42	5.56	5.
$95	5.59	5.72	5.86	6.
$100	5.88	6.02	6.17	6.
$105	6.18	6.33	6.48	6.
$110	6.47	6.63	6.79	6.
$115	6.76	6.93	7.10	7.
$120	7.06	7.23	7.41	7.
$125	7.35	7.53	7.72	7.
$130	7.65	7.83	8.02	8.
$135	7.94	8.13	8.33	8.

Big Savings on Paint Needs at Gambles!

Protect that big investment—paint now!

EXTERIOR HOUSE PAINT $4.95 GALLON
36 Colors and White
Compare at $6.00 Gal.
Produces a weatherproof, lastingly beautiful finish. Buy on easy terms!
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RANCH RED EXTERIOR PAINT $4.95 GALLON
Compare at $6.00 Gal.
Non-fading, non-bleeding bright red paint—pure linseed oil base.
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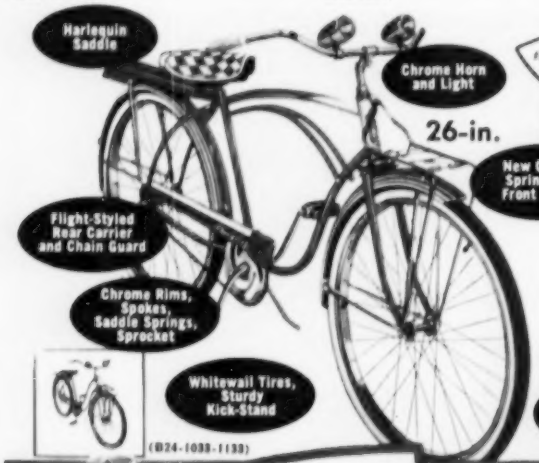
HOMECOTE RED BARN PAINT
$2.98 GALLON
Protect that big investment with this low-cost favorite. Lastingly durable.
(B30-3801)



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NEW DELUXE FEATURES!

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YOURS AT GAMBLES FOR JUST $49
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DECORATOR JAR SET
$1.27 SET
Four covered Anchorglass kitchen jars, 4 oz. to 2 lb.
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Gambles HOMEMAKER SPECIALS

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SAVE 42¢ on this stunning
4-PIECE TABLE SET
$1.19 Value 77¢
Sugar, creamer, salt and pepper in Golden Grape pattern.

SAVE 15¢
Plastic Covered 50 Ft.
CLOTHESLINE
Reg. 59¢ 44¢
Colorful — Won't Snag!
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Nationally Advertised at $2.98
Save over ½ on Famous Foley Magnetic
CAN OPENER
Yours at Gambles for Just $1.44
Easy-action opener with magnetic lid holder.
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Save 32% *on this 6-Pc.*
REFRIGERATOR SET
Reg. $1.29 Now 88¢
Three heatproof jars with covers. In clear and ivory glass.
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SAVE! SIX-INCH GLASS
MIXING BOWL
REG. 17¢ 9¢
7-in. Size 27¢
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ALL-TIME LOW PRICE!
24-Piece Tarnish-Proof Set
STAINLESS TABLE FLATWARE
$5.95 Value Now Only $3.88
Six table settings (knife, fork, teaspoon, dessert spoon). Durable chest included.

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SAVE 61¢
4-INCH NYLON PAINT BRUSH
Reg. $2.49 Now Only $1.88
Long 3" bristles of 100% Tynex nylon. Outwears ordinary bristle brushes 5 to 1.

$3.98 Value, 5-Piece
FILE SET AND CASE
GAMBLES PRICE 99¢
5 useful files — square, flat, half-round, three-square and hand type — in sturdy plastic case.
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Heavy Duty, Double-Stitched 6 x 8 FT.
TARPAULIN
Reg. $6.95 Value
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7'6"x10'..$8.69 9'x12'..$12.50
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D-CON'S FLI-CON
1 Lb. Pkg. $1.89
Specially designed for farm use—barns, manure piles, pens, and poultry houses. Ready to use, tested formula. Unconditionally guaranteed.
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MANILA ROPE
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20% PRICE CUT on famous
FARMCREST BELT DRESSING
Reg. 59¢ Now Only 47¢
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YOU SAVE 1/3

Quick-Acting Farmcrest **CATTLE SPRAY**

$1.49 Value NOW ONLY **95¢** Full Gallon

Kills hog lice and chicken mites on contact; gives long protection against flies and mosquitoes.

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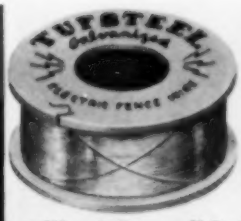

FREE! ½ mile spool "Tufsteel" Electric Fence Wire with purchase of **FARMCREST**

"Weed Demon" Deluxe 110V. Fence Controller

Buy of the year! Full 160-rod spool of galvanized kink-resistant steel wire FREE with popular "Weed Demon" — the controller that kills weeds on contact, ends shorts. Quick-indicator lights, double fuses. Fully guaranteed, even against lightning, power surges!

ALL FOR JUST **$22.95** $2.30 Down

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Fence Insulators

49¢ Box of 25

Quality porcelain, with leather washers.

(B38-3263)

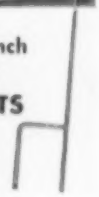
"Quick-Way" galvanized **WIRE FASTENERS**

Box of 100 **30¢**

(B38-3293)

"H" Style 48-Inch **ELECTRIC FENCE POSTS**

42¢ Each



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GUARANTEED 48 MONTHS!

VARCON 6-VOLT "SUPER-ACTIVE" BATTERY

$14.95 Gr. 1 or Gr. 2L Exchange

Big 110 amp. hr. capacity, hard rubber case, bonded glass separators.

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GUARANTEED 30 MONTHS!

VARCON 12-VOLT "DELUXE" BATTERY

$15.45 Gr. 24S Exch.

Gr. 60K, 28N, 3EE Exch. **$17.45**

"No-Overflow" vents, plastic separators, hard rubber case with leakproof cell covers.

(3-612, 616, 620, 622)

Come in and arrange for a **FREE DEMONSTRATION** of this 20th Century 180 Amp HEAVY DUTY **WELDING OUTFIT**

YOUR BEST BUY AT **$214.50** $21.50 Down

Complete with cutting top, dial control, dial light, 115-volt appliance outlet, 18-ft. welding cable, electrode holder, 12-ft. ground cable with clamp, helmet, welding rods, & instruction book. Welds ½" thick material, and heavier. 220-volt.

FREE DELIVERY to your home or farm!

With carbon arc torch for brazing, heating, etc. $234.50

FREE INSTRUCTIONS by factory-trained specialist!

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(A38-9343)

SAVE $3.05 NOW! Get 10 cartridges and cartridge-loading **GREASE GUN**

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Gun has extra-large piston developing up to 8,000 lbs. pressure . . . 10 grease cartridges each contain 14½ oz. multi-purpose #2 lithium grease.

Compare at $8.50!

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SAVE 30¢ on this 6-Qt. Galvanized **OFFSET TRACTOR FUNNEL**

Reg. $1.69 Now Only **$1.39**

(B4-1455)

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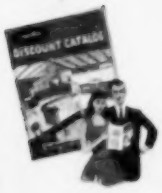

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Gambles
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How to find the least-cost source of

TDN*

*Total digestible nutrients (TDN) is the sum of all the digestible organic nutrients in feed. These include protein, fat, and carbohydrates (fiber and nitrogen-free extract). Together they supply the heat and energy needed by the animal

Low-pro
Alfalfa-
Barley.
Beet pul
Corn, w
Corn, N
Corn-an
Distiller
Kafir gr
Milo gr
Molasse
Molasse
Oats..
Oat mil
Rye...
Sorghum
Wheat.

Livestock raisers, dairymen, and poultrymen have a choice of several feeds to make up an animal's ration. The feeds used to make up these rations vary in price from time to time. However, price is not the only means of determining actual cost of various feeds. You must also consider comparative energy values.

Finding the cheapest source of TDN can mean a real saving in feed costs. The chart at right will help you find the least-cost source of TDN by comparing the cost of 100 pounds of TDN from different sources.

Listed at the right above are the three classes of feed—high protein, medium protein, and low protein. Instructions below tell how to use this information to select the feeds that will supply nutrients at the least cost.

Here's how it works

- From the list at upper right, select the feeds on which you want to compare prices.
- Find the code number for each feed from this list.
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- Find the cost per 100 pounds of TDN of the feeds you are comparing.
- Compare the two prices—select the feed with the lowest price to use in ration.

EXAMPLE

FEED	PRICE PER TON	INDEX NUMBER	COST PER 100# TDN
SBOM	$50.00	5	$3.25
LSOM	$63.00	7	$4.45

COST OF FEED PER TON	COST OF 100 POUNDS OF TO				
	1	2	3	4	5
$25	$1.47	$1.51	$1.54	$1.58	$1.6
$30	1.76	1.81	1.85	1.90	1.9
$35	2.06	2.11	2.16	2.22	2.2
$40	2.35	2.41	2.47	2.53	2.6
$45	2.65	2.71	2.78	2.85	2.9
$50	2.94	3.01	3.09	3.16	3.2
$55	3.24	3.31	3.40	3.48	3.5
$60	3.53	3.61	3.70	3.80	3.9
$65	3.82	3.92	4.01	4.11	4.2
$70	4.12	4.22	4.32	4.43	4.5
$75	4.41	4.52	4.63	4.75	4.8
$80	4.71	4.82	4.94	5.06	5.1
$85	5.00	5.12	5.25	5.38	5.5
$90	5.29	5.42	5.56	5.70	5.8
$95	5.59	5.72	5.86	6.01	6.1
$100	5.88	6.02	6.17	6.33	6.4
$105	6.18	6.33	6.48	6.65	6.8
$110	6.47	6.63	6.79	6.96	7.1
$115	6.76	6.93	7.10	7.28	7.4
$120	7.06	7.23	7.41	7.59	7.7
$125	7.35	7.53	7.72	7.91	8.1
$130	7.65	7.83	8.02	8.23	8.4
$135	7.94	8.13	8.33	8.54	8.7

LIST OF COMMON SOURCES OF TDN

Low-protein feeds	Code number
Alfalfa-molasses feed	15
Barley	4
Beet pulp, dried	8
Corn, well dried	2
Corn, No. 2 grade	3
Corn-and-cob meal	6
Distillers' rye grains, dried	12
Kafir grain	3
Milo grain	4
Molasses, beet	14
Molasses, cane	15
Oats	8
Oat millfeed	16
Rye	3
Sorghum grain	6
Wheat	2

Medium-protein feeds	Code number
Bewers' grains, dried	11
Corn-gluten feed	5
Distillers' corn grains, dried	1
Distillers' grains, mixed, dried	6
Wheat bran	8
Wheat middlings	4

High-protein feeds	Code number
Corn-gluten meal	3
Cottonseed meal	6
Fish meal	10
Linseed meal, old process	4
Linseed meal, solvent process	7
Skim milk, dried	2
Soybean oil meal, solvent process	5
Soybean oil meal, expeller process	2

OS OF TOTAL DIGESTIBLE NUTRIENTS IN VARIOUS FEEDS AT DIFFERENT PRICES

4	5	6	7	8	9	10	11	12	13	14	15	16
.58	$1.62	$1.67	$1.71	$1.76	$1.81	$1.87	$1.92	$1.98	$2.05	$2.12	$2.19	$2.91
.90	1.95	2.00	2.05	2.11	2.17	2.24	2.31	2.38	2.46	2.54	2.63	3.49
.22	2.27	2.33	2.40	2.46	2.54	2.61	2.69	2.78	2.87	2.97	3.07	4.07
.53	2.60	2.67	2.74	2.82	2.90	2.99	3.08	3.17	3.28	3.39	3.51	4.65
.85	2.92	3.00	3.08	3.17	3.26	3.36	3.46	3.57	3.69	3.81	3.95	5.23
.16	**3.25**	3.33	3.42	3.52	3.62	3.73	3.85	3.97	4.10	4.24	4.39	5.81
.48	3.57	3.67	3.77	3.87	3.99	4.10	4.23	4.37	4.51	4.66	4.82	6.40
.80	3.90	4.00	4.11	4.23	4.35	4.48	4.62	4.76	4.92	5.08	5.26	6.98
.11	4.22	4.33	**4.45**	4.58	4.71	4.85	5.00	5.16	5.33	5.51	5.70	7.56
.43	4.55	4.67	4.79	4.93	5.07	5.22	5.38	5.56	5.74	5.93	6.14	8.14
.75	4.87	5.00	5.14	5.28	5.43	5.60	5.77	5.95	6.15	6.36	6.58	8.72
.06	5.19	5.33	5.48	5.63	5.80	5.97	6.15	6.35	6.56	6.78	7.02	9.30
.38	5.52	5.67	5.82	5.99	6.16	6.34	6.54	6.75	6.97	7.20	7.46	9.88
.70	5.84	6.00	6.16	6.34	6.52	6.72	6.92	7.14	7.38	7.63	7.89	10.47
.01	6.17	6.33	6.51	6.69	6.88	7.09	7.31	7.54	7.79	8.05	8.33	11.05
.33	6.49	6.67	6.85	7.04	7.25	7.46	7.69	7.94	8.20	8.47	8.77	11.63
.65	6.82	7.00	7.19	7.39	7.61	7.84	8.08	8.33	8.61	8.90	9.21	12.21
.96	7.14	7.33	7.53	7.75	7.97	8.21	8.46	8.73	9.02	9.32	9.65	12.79
.28	7.47	7.67	7.88	8.10	8.33	8.58	8.85	9.13	9.43	9.75	10.09	13.37
.59	7.79	8.00	8.22	8.45	8.70	8.96	9.23	9.52	9.84	10.17	10.53	13.95
.91	8.12	8.33	8.56	8.80	9.06	9.33	9.62	9.92	10.25	10.59	10.96	14.53
.23	8.44	8.67	8.90	9.15	9.42	9.70	10.00	10.32	10.66	11.02	11.40	15.12
.54	8.77	9.00	9.25	9.51	9.78	10.07	10.38	10.71	11.07	11.44	11.84	15.70

LIST OF COMMON SOURCES OF TDN

Low-protein feeds	Code number
Alfalfa-molasses feed	15
Barley	4
Beet pulp, dried	8
Corn, well dried	2
Corn, No. 2 grade	3
Corn-and-cob meal	6
Distillers' rye grains, dried	12
Kafir grain	3
Milo grain	4
Molasses, beet	14
Molasses, cane	15
Oats	8
Oat millfeed	16
Rye	3
Sorghum grain	6
Wheat	2

Medium-protein feeds	Code number
Bewers' grains, dried	11
Corn-gluten feed	5
Distillers' corn grains, dried	1
Distillers' grains, mixed, dried	6
Wheat bran	8
Wheat middlings	4

High-protein feeds	Code number
Corn-gluten meal	3
Cottonseed meal	6
Fish meal	10
Linseed meal, old process	4
Linseed meal, solvent process	7
Skim milk, dried	2
Soybean oil meal, solvent process	5
Soybean oil meal, expeller process	2

S OF TOTAL DIGESTIBLE NUTRIENTS IN VARIOUS FEEDS AT DIFFERENT PRICES

4	5	6	7	8	9	10	11	12	13	14	15	16
58	$1.62	$1.67	$1.71	$1.76	$1.81	$1.87	$1.92	$1.98	$2.05	$2.12	$2.19	$2.91
90	1.95	2.00	2.05	2.11	2.17	2.24	2.31	2.38	2.46	2.54	2.63	3.49
22	2.27	2.33	2.40	2.46	2.54	2.61	2.69	2.78	2.87	2.97	3.07	4.07
53	2.60	2.67	2.74	2.82	2.90	2.99	3.08	3.17	3.28	3.39	3.51	4.65
85	2.92	3.00	3.08	3.17	3.26	3.36	3.46	3.57	3.69	3.81	3.95	5.23
16	**3.25**	3.33	3.42	3.52	3.62	3.73	3.85	3.97	4.10	4.24	4.39	5.81
48	3.57	3.67	3.77	3.87	3.99	4.10	4.23	4.37	4.51	4.66	4.82	6.40
80	3.90	4.00	4.11	4.23	4.35	4.48	4.62	4.76	4.92	5.08	5.26	6.98
11	4.22	4.33	**4.45**	4.58	4.71	4.85	5.00	5.16	5.33	5.51	5.70	7.56
43	4.55	4.67	4.79	4.93	5.07	5.22	5.38	5.56	5.74	5.93	6.14	8.14
75	4.87	5.00	5.14	5.28	5.43	5.60	5.77	5.95	6.15	6.36	6.58	8.72
06	5.19	5.33	5.48	5.63	5.80	5.97	6.15	6.35	6.56	6.78	7.02	9.30
38	5.52	5.67	5.82	5.99	6.16	6.34	6.54	6.75	6.97	7.20	7.46	9.88
70	5.84	6.00	6.16	6.34	6.52	6.72	6.92	7.14	7.38	7.63	7.89	10.47
01	6.17	6.33	6.51	6.69	6.88	7.09	7.31	7.54	7.79	8.05	8.33	11.05
33	6.49	6.67	6.85	7.04	7.25	7.46	7.69	7.94	8.20	8.47	8.77	11.63
65	6.82	7.00	7.19	7.39	7.61	7.84	8.08	8.33	8.61	8.90	9.21	12.21
96	7.14	7.33	7.53	7.75	7.97	8.21	8.46	8.73	9.02	9.32	9.65	12.79
28	7.47	7.67	7.88	8.10	8.33	8.58	8.85	9.13	9.43	9.75	10.09	13.37
59	7.79	8.00	8.22	8.45	8.70	8.96	9.23	9.52	9.84	10.17	10.53	13.95
91	8.12	8.33	8.56	8.80	9.06	9.33	9.62	9.92	10.25	10.59	10.96	14.53
23	8.44	8.67	8.90	9.15	9.42	9.70	10.00	10.32	10.66	11.02	11.40	15.12
54	8.77	9.00	9.25	9.51	9.78	10.07	10.38	10.71	11.07	11.44	11.84	15.70

9-Passenger Country Sedan has plenty of room for a boatload of people or the boat itself.

You'd never know the price was low! This handsome 6-passenger Ranch Wagon looks like a million . . . costs so little it makes an excellent second car.

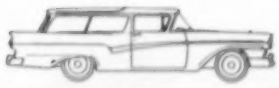
NEW FARMHAND

best-looking, hardest-working, best-selling!

These trim new Ford Station Wagons are built for business.

You get over 31 sq. ft. of load-space. New swept-back Ball-Joint front suspension and new Level-Ride rear suspension take the jounce and joggle out of the bumpiest back roads . . . whether you're riding alone or in a fully loaded wagon (a big reason why Ford Wagons are such favorites with the womenfolk). And you can choose the whispering, smooth power of Ford's Thunderbird V-8, or the thriftiness of Ford's Mileage Maker Six . . . most modern Six in the industry.

Pick your favorite Ford Station Wagon and ask for an Action Test at your Ford Dealer's *today*.



Del Rio Ranch Wagon, a 6-passenger beauty, inside and out. Single and Style Tone colors.

9-Passenger Country Squire, America's most distinguished station wagon.

6-Passenger Country Sedan gives you the most convenience for the least money.

It costs less to go first
... in the new kind of FORD

So easy! 50% more jam ...and fresher flavor

because you boil only 1 minute with SURE-JELL or CERTO!

Recipe: perfect homemade peach jam. Peel, pit and crush *3 lbs.* fully ripe peaches. Mix 4 cups prepared fruit in very large saucepan with *1 box Sure-Jell.* (Or use liquid *Certo*—recipe on bottle.) Stir over high heat until mixture comes to hard boil.

Stir in 5 cups sugar at once. Bring to full rolling boil. Boil hard for *1 minute only*, stirring constantly. This short boiling time means less juice boils away—so you get up to 50% higher yield, and the flavor comes through fresher—with *Sure-Jell* or *Certo!*

Remove from heat, then alternately stir and skim off foam for 5 minutes. Ladle into glasses. Paraffin at once. Yield: 9 medium glasses, for mere pennies a glass! And you're *sure* of perfect results with either powdered *Sure-Jell* or liquid *Certo!*

Your choice!

SURE-JELL

powdered natural fruit pectin

or **CERTO**

liquid natural fruit pectin

Pectin causes jelling. Amounts of pectin in fruits vary.

But *no guessing* with recipes you get with *Sure-Jell* or *Certo.*

Products of General Foods

Salads

From page 47

Suggestions for Fruit Plates:

Honeydew melon filled with fruit sherbet
Cantaloupe with lime or lemon slices
Cottage cheese—add nuts or bright-colored gelatin cubes
Raspberries or blueberries in pear halves
Light, dark, date-nut or brown-bread sandwiches spread with softened cream cheese, butter
Orange slices or plums or cherries or clusters of grapes
Bananas spread with mayonnaise or peanut butter and rolled in chopped nuts or coconut
Peach halves with blueberries or grapes
Pineapple bits or minted watermelon cubes
Whole strawberries
Dates or prunes stuffed with cheese
Salted nuts

Special Salad Dressing

- 1 cup mayonnaise
- ½ cup sour cream
- ⅓ cup chopped parsley
- 2 to 3 tablespoons chopped green onion
- 1 clove minced garlic
- 3 tablespoons vinegar
- 1 tablespoon lemon juice

Combine all ingredients and chill for several hours before serving.

Garlic-Oil Dressing (Makes about 1 cup)

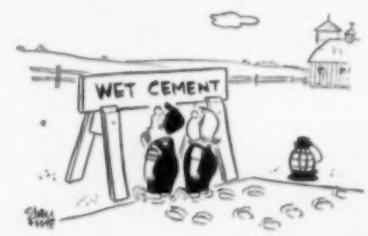
- 4 cloves garlic, minced
- ¾ cup salad oil
- ⅓ cup white vinegar

Let garlic stand in oil several days. Add vinegar. Shake well before using. Sprinkle salad with salt and coarsely ground pepper and then toss with the salad dressing.

Italian Dressing with Blue Cheese
(Makes 1⅔ cups)

- 1 cup salad oil
- ¾ cup white vinegar
- 1 tablespoon lemon juice
- ¾ cup chopped parsley
- ¼ cup chopped green onions
- ¼ cup crumbled blue cheese
- ¼ teaspoon monosodium glutamate
- ½ teaspoon salt
- ½ teaspoon pepper
- 1 clove garlic, minced

Mix all ingredients and let blend for several hours or overnight. Serve with tossed vegetable salads.



"The first word isn't cat, THAT much I'm sure of."

Photograph: Hopkins

Plateful of chewy Snack Bars and tall glasses of lemonade make good refreshments for a warm afternoon. Bars are prepared without baking and chilled in the refrigerator till firm.

For teen-age cooks

No-bake cookies

Too hot to make cookies? Not these, the no-bake kind. You won't need to heat up the kitchen by turning on the oven. All cooking is done on top of the range.

Recipe for the Skillet Cookies was sent to us by Tom McBride, aged 15, from Linn County, Iowa. Sixteen-year-old Sharon Trautman, Stutsman County, North Dakota, sent the Snack Bars recipe. You'll want to try both easy-to-make cookies.

Skillet Cookies (Makes 24 cookies)

- 1 beaten egg
- ¾ cup chopped dates
- ½ cup sugar
- ½ teaspoon vanilla
- ¼ teaspoon salt
- 1¼ cups crisp rice cereal
- ¼ cup chopped walnuts
- Flaked coconut

Combine egg, chopped dates, and sugar in skillet. Cook slowly, stirring till thick enough to hold together. Remove from heat. Add vanilla, salt, cereal, and nuts. Stir; let cool. Form into balls the size of walnuts. Roll in coconut.

Snack Bars (Makes 32 bars)

- 1 cup sugar
- 1 cup light corn syrup
- 1 cup heavy cream
- 1 teaspoon vanilla
- 3 cups flaked coconut
- 1 cup peanuts
- 5 cups crisp rice cereal
- 4 cups corn flakes, crushed

Combine sugar, syrup, and cream; cook mixture to soft ball stage (236°). Remove from heat; add vanilla. Combine coconut, peanuts, and cereals. Pour syrup mixture over and mix well. Press into 13x9x2-inch pan and chill till firm. Cut in bars.

Let BUDS do it!

Baby care . . . Use 100% Sterile BUDS for baby's most delicate cleansing. BUDS are just the right size for baby's tiny needs.

Colds . . . Use 100% Sterile BUDS to cleanse nostrils, apply drops or ointment. The softest, finest cotton is used . . . safe for nose and ears.

Small cuts . . . Use 100% Sterile BUDS to cleanse small cuts and scrapes safely, to apply medication. Tight-spun BUDS won't "fuzz up."

Tender gums . . . Use 100% Sterile BUDS to massage or treat tender gums. They're so gentle, so safe . . . handy for bedroom, bath, nursery.

100% STERILE

Made by the most trusted name in surgical products

Johnson & Johnson

For Top Power in Your Tractor or Truck Use Auto-Lite Transport Spark Plugs

To get top power from your tractor, truck or other power equipment, you need a heavy-duty spark plug that can stand up to the tough demands of farm operation.

Rugged, reliable Auto-Lite Transport Spark Plugs are ignition-engineered to give your equipment the hot spark it needs to give peak power for heavy hauling. Check these important features:

1. **HEAVIER INSULATOR with greater resistance to breakage and high-voltage leakage.**
2. **INSULATOR TIP ignition-engineered to stay clean longer. Safeguards performance.**
3. **OVERSIZED ELECTRODES of a special alloy developed for maximum resistance to heat and electrical erosion.**

This is the heavy-duty plug used in many of the nation's largest truck fleets—a multi-million-mile test of spark plug performance. Your Auto-Lite Spark Plug Dealer carries a complete line of Auto-Lite Spark Plugs for every engine on your farm. See him soon!

AUTO-LITE
spark plugs

Auto-Lite manufactures over 400 products, including Spark Plugs, Batteries, Wire and Cable, and Automotive Electrical Systems . . . sold throughout the United States and Canada.

SPARK PLUG INSPECTION CHART

FREE

HELPS TO DIAGNOSE ENGINE TROUBLES

The Electric Auto-Lite Company
Department "S," Toledo 1, Ohio

Please send me handy "Plug Chek" Wall Chart that tells how to analyze engine performance by comparing used spark plugs with illustrations representing various spark plug conditions.

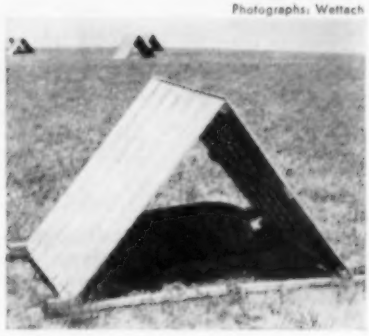
Name _____

Address _____

City/Town _____ County _____ State _____

Successful shortcuts®

Photographs: Wettach



Individual sow shelters are used on the John Morris farm, Louisa County, Iowa. Low-cost units are made by using two 6'x6' panels of cleated barn boards for sides, nailing them to 2x4 oak skids.

Gravity-flow cooling system on the Harold Parkey farm, Livingston County, Missouri, uses plastic irrigation-type garden hose with small holes. Concrete-floored shed is located near pond where water supply for the hogs is secured.

Hand truck made from scrap metal and surplus airplane wheels was built by Bill Tuttle, Cooper County, Missouri. Unit was welded together in his farm shop. It eliminates much lifting in the granary.

EARS FLOW

...Non-Stop!

A solid gold stream of ears travels up the Corn Harvester conveyor into your wagon. Ear after ear . . . up to 15,000 or more an hour (175 bu. per hr.) . . . in continuous flow.

That's *Sure Flow* corn harvesting . . . the new Allis-Chalmers way.

The story of how it cuts harvesting costs . . . how it saves kernels, down corn, man-hours, tractor time, and dollar outlay . . . is meaningful to every corn grower.

Corn follows a straight, quick route . . . non-stop! Ears are picked up by low-sloping gathering snouts . . . guarded from shelling loss by new quick-adjustable stripper plates . . . kept moving by new flexible Rotary Feeders . . . and smoothly husked by rubber-to-rubber husking rolls with 26 rubber husking plugs per corn row.

You'll like this new surer, safer, rubber-grip husking.

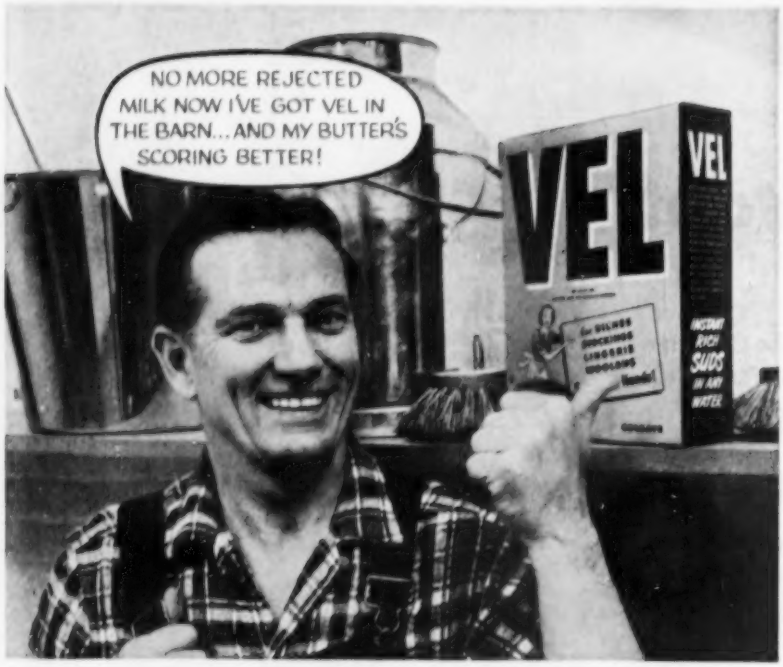
ALLIS-CHALMERS, FARM EQUIPMENT DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS

LISTEN! *National Farm and Home Hour—NBC—Saturdays*

Compactness, sturdiness, safe shielding, and low-set stability, are "earmarks" of Allis-Chalmers Corn Harvesters. There's a model that's right for you—low-priced for home ownership—at your Allis-Chalmers dealer's. Models for both husking and snapping. One-row shown with new Dynamic D-14 Tractor (below) and 2-row with WD-45 Tractor (above).

VEL helps bring in bigger milk checks!



Washes away milk scum in seconds . . . gets equipment GRADE A clean!

It takes Grade A clean dairy equipment to deliver Grade A milk and top-quality butter—and that's what you get with VEL even in cold, hard water! Non-alkali VEL . . . twice as fast as soap . . . gets rid of milk scum that causes milkstone. It's the detergent recommended by agricultural schools and milk sanitarians. Get VEL in the large economy box!

...IT'S MARVELOUS!

VEL is the trade-mark of the Colgate-Palmolive Co.

Efficiency not expensive

From page 53

Ground corncobs are stored on 4th floor. Here Roth is shown pushing new supply down chute to each floor. Cobs are ground, blown to overhead bin when supply is available.

To divert ground corncobs to each floor of multiple-story laying house, Roth has placed a hinged door in the chute on each floor. All he has to do is flip the door open or closed.

A trap door is located beneath roosts on each floor. Manure spreader is placed on first floor directly below opening. As you can see, roosts are raised to help in cleaning.

Age Stage

Soon after children marry,
Grandparents are the critters
Who at the cribside tarry
As unpaid baby sitters.

—**Addison H. Hallock**

I'm building my new machinery shed with Penta-treated poles and lumber

Smart farmer!

"Why go to the expense and trouble of putting up a conventional-type farm building?" he asks.

New pole-type buildings (they don't need costly foundations or footings!) cut building time and labor . . . are easier to build and save you about half the cost of ordinary structures!

And—if you use Penta-treated poles and lumber, you've got a building that's every bit as permanent. Penta never allows wood's enemies—decay, termites and other insects — to get a foothold in wood. That's why poles and lumber treated with Penta last 30 years or longer . . . save you two or more building replacements.

Penta-treated wood's *big* advantage is that it's *clean*. Penta doesn't leach out of wood to "burn" hands, stain clothes or harm livestock. It's the easiest-handling treated wood you've ever seen.

Mr. Farmer: The dealer for Penta-treated wood in your vicinity displays this symbol. Look for it! For your Grange meetings and other club programs, "OLLIE GRUBER AND THE MOST IN POSTS" is a 20-min. color and sound movie that's entertaining and informative. Write Monsanto about it today.

Organic Chemicals Division
MONSANTO CHEMICAL COMPANY
Dept. FF-7, St. Louis 1, Missouri

MONSANTO

WHERE CREATIVE CHEMISTRY WORKS WONDERS FOR YOU

Strong concrete

From page 72

Research shows that a bag of cement uses under 3 gallons of water in the hydration process. Since there is no physical or chemical change in sand and gravel, and very little absorption, you are working with the cement alone in terms of water use. But you use 6 gallons to get volume! The extra 3 gallons is absorbed by the atmosphere during the curing process.

When this 3 extra gallons is evaporated, tiny, microscopic holes form through the concrete. They are too few, and too small to weaken the final job. But when you add more water, you get more holes. These extra holes weaken your concrete.

So, you're ahead by sticking to 6 gallons of water per bag of cement—including the water in the sand. Average wet sand contains about 1 gallon of water. If you use wet sand, cut the water you add to 5 gallons per bag, then, add enough sand and gravel to make a plastic workable mix.

There's one time when it's most important to look your best. It's just before crossing a busy street.

When you mix your own, make a trial batch. Start by deciding on the amount of water you'll use, depending on whether you have wet or dry sand. For example, if you have a half-bag size mixer, add the exact amount of water. Then add a shovel or 2 of gravel to keep the cement cut loose from the mixer. Add a half bag of cement. Your next step will be to add the sand and gravel to make a workable mix.

On the farm job, this is done with shovels. In this first trial mix, keep a careful tab on the number of each you add until you get a workable and plastic mix. Then use the same number of shovelfuls on succeeding batches. After you know how much aggregate to add, the order in which you add water, cement, and aggregate is not important in succeeding batches.

You might start with a trial mix of 2¼ parts of sand and 3 parts of crushed rock, screened gravel, or chat for each part of cement. Vary this until you get a plastic and workable mix. (See page 118.)

The man at the mixer will also need to use judgment about the exact amounts on each batch, because there may be a difference in the size of your aggregate.

Also, if you are using creek gravel, try a mix of 4 parts of creek gravel for each part of cement. You may need some sand to get a smooth mixture. But *never vary the ratio of cement to water*. Make adjustments in the mix by varying the amounts of sand and gravel. The big key to quality concrete is using cement and water in the right proportions, that is, one sack of cement to 6 total gallons of water.

We hear a lot about curing concrete. It is important because concrete reaches most of its full strength only after about a month. That's if you do a good job of curing. Best bet is to use a concrete curing solution. It is a mixture of a light paraffin and light oil. Soon after being sprayed on, the oil evaporates and the paraffin membrane excludes air. This keeps the concrete from drying out or losing moisture by evaporation.

"Spunky"

"Mr. Lane was real nice. He said while you're at it why not borrow his barn, too!"

Stalks . . . stubble or 3-inch brush you cut 'em all down to size with a Brillion

You'll rip through tough trash . . . level stalks and stubble for smooth plowdown . . . smash up wrist-thick brush like so many soda-pop straws — all with this rugged-and-ready Brillion Cut-All. It gives you exclusive shockless shredding because it's slip-clutch protected. And there's a quick-attach Cobra-Head Blower (extra) so you can cut, chop and load green forage and bedding in one fast trip. Five-foot cut. Straight pull, offset, 3-point hitch models.

Brillion

CUT-ALL SHREDDER and SHREDDER-HARVESTER

IF BRILLION MAKES IT, IT MUST BE GOOD

Clip and mail to Brillion Iron Works, Inc., Dept. CH-1-B, Brillion, Wisconsin. Send me complete information on the Brillion Implements I've checked.

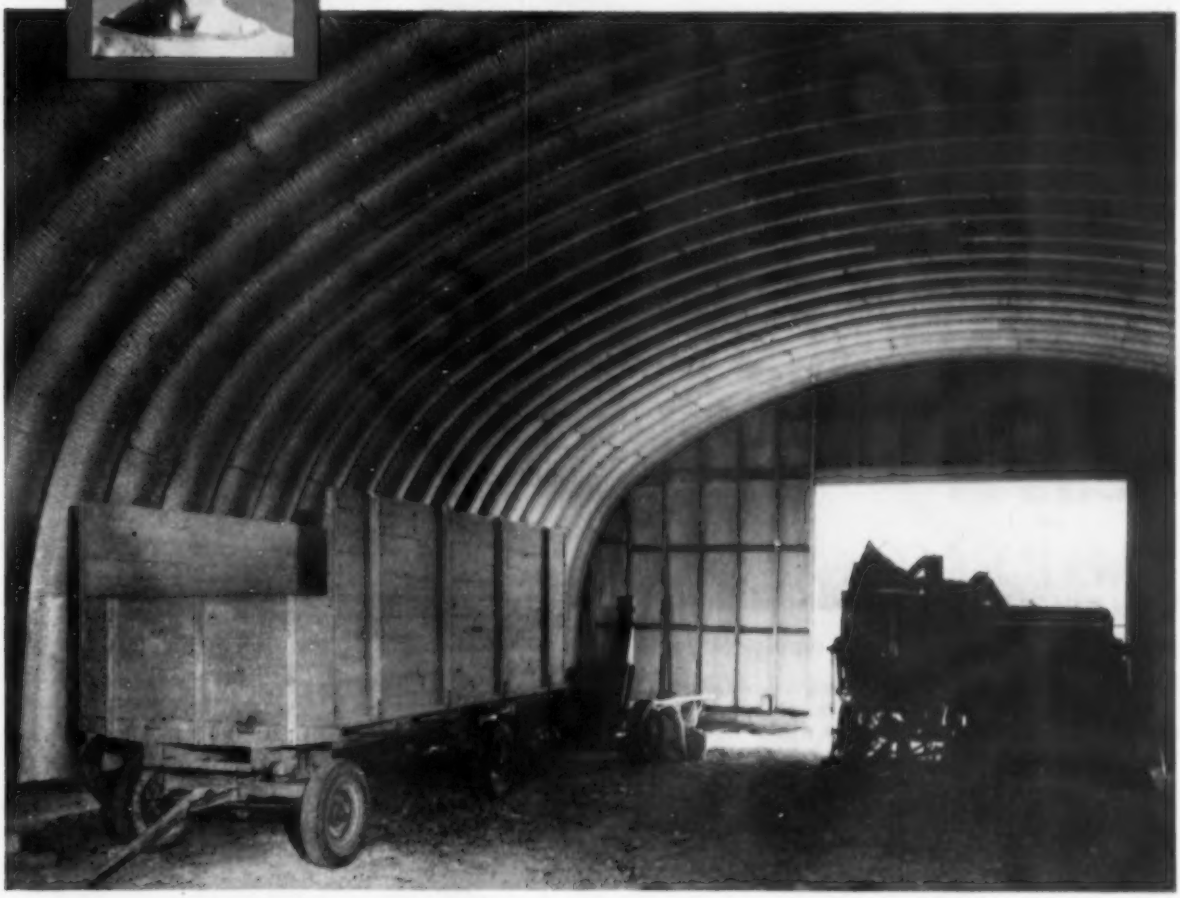
☐ Cut-All Shredders
☐ Cobra-Head Blower
☐ Shredder-Harvester
☐ I am a student

Write your name and address in the margin.

exclusive Shockless Shredding — as easy on your tractor as a PTO mower

"I'm no carpenter, but I put up this steel building easily,"

says L. S. Dausman, Saranac, RD #1, Michigan



Mr. Dausman did a good job of erecting his steel building—despite the fact that he is not a skilled carpenter or builder.

In addition to the quick, easy construction of steel farm buildings, Mr. Dausman points out that he especially likes the "no maintenance" and fire-resistant features. "I lost part of my old barn by fire, but this building's not going to burn.

"Another thing," adds Mr. Dausman, "I've got more room in my steel building, with no obstructions. And, there's no problem with steel construction if I want to add on to it. It will be easy."

Mr. Dausman presently uses his steel building for equipment storage. His 220-acre farm also boasts a steel corn crib and a steel grain bin.

Factory-Built Steel Buildings, fabricated from USS Galvanized Steel Sheets, can do a great deal toward making *your* farm a more practical, better paying investment. For the complete rundown on all the advantages of Factory-Built Steel Buildings, return the attached coupon. There's no obligation, of course.

MODERNIZE NOW FOR A BETTER FARM INCOME.
RETURN THIS COUPON

Agricultural Extension
United States Steel Corporation
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I am interested in steel buildings for the following:

☐ dairy barns ☐ hay storage ☐ machinery storage
☐ cattle shelters ☐ grain storage ☐ poultry houses
☐ other .....

Approximate size or capacity .....

☐ Please have a Steel Building representative call on me with further information.

Send information to:

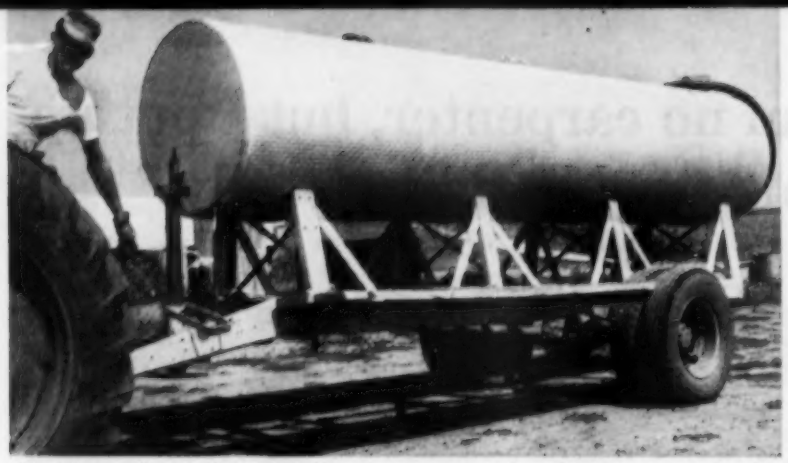
Name .....

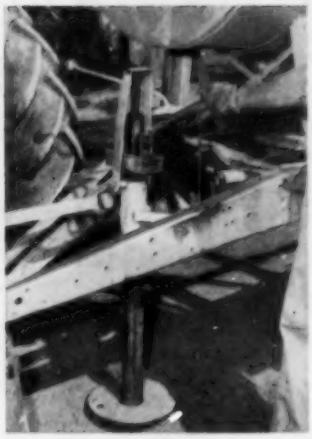
Address ..... Town .....

County ..... State .....

United States Steel produces high-quality USS Galvanized Steel Sheets and Structural Steel which our customers manufacture into durable farm buildings. Your request for information will be forwarded to the manufacturers of these buildings, and you will hear directly from them.

UNITED STATES STEEL



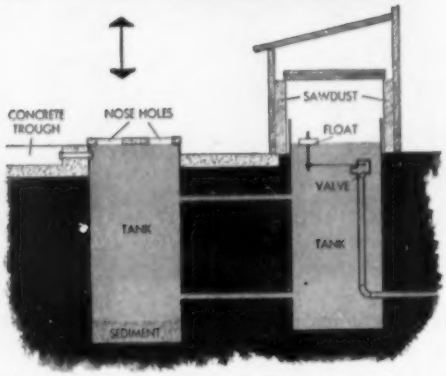


This 1,050-gallon tank is mounted on a converted truck chassis hitched to tractor drawbar. Dual wheels can be driven with PTO. A built-in jack (photograph at right) allows unhitching at any location. Tank is filled with a hose, is used by Richard Knupp, Ainsworth, Iowa, farmer.

Photographs: Wettach; Benn; Pike

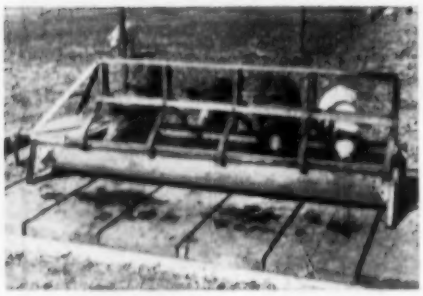
Hog-watering ideas

Now is a good time to start thinking about ways to provide a more adequate water supply for your swine herd. These ideas developed by other swinemen may fit your summer or winter needs



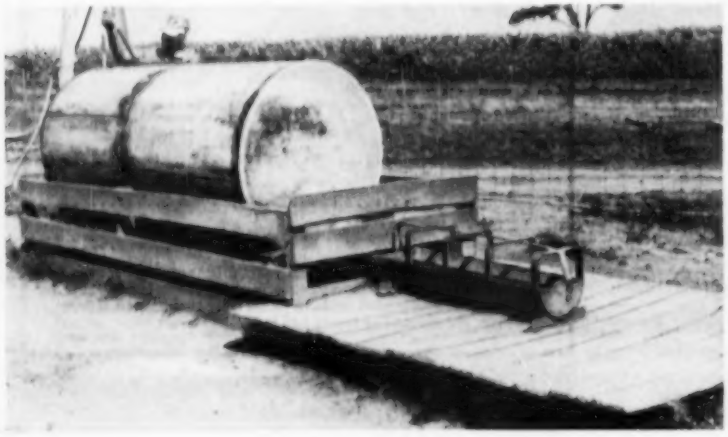
Automatic hog waterer on Herbert Pike farm, Monona County, Iowa, depends upon circulation between 2 underground tanks to prevent winter freezing. Valve, float are in insulated box.

Four nose holes are used in winter (see photograph above); concrete trough is used in summer.



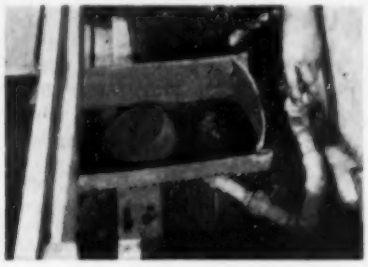
Watering device used by Bernard Collins, Clarion, Iowa, swine raiser, is homemade and of inexpensive construction.

Trough is made from water boilers and provides drinking space for 80 to 100 head. Cracks in floor of platform let overflow water drop through, prevents mudholes at sides, is useful in pasture units.



A 500-gallon tank and trough combination is used by John Morris, Louisa County, Iowa. Sled of 4"x6"x16' runners holds tank and platform for waterer, can be moved as unit to any location needed.

The trough is made from old range boiler and fitted with an automatic float valve.



PREVENT THIS—This steer has shipping fever, cause of $25 million cattle losses every year.

WITH TERRAMYCIN—5-day conditioning feeds with Terramycin prevent, control shipping fever.

STOP SHIPPING FEVER LOSSES

with 5-day Conditioning Feeds containing Terramycin

Here's great news for cattlemen . . . proof from feedlots throughout the country on a new, cost-cutting, *common-sense* way to control shipping fever losses with *5-day conditioning feeds containing Terramycin.*

During the past year, thousands of cattlemen tried this new 5-day feed. They called their own shots . . . used it under their own conditions.

The result? "No doubt about it," the reports said, "Terramycin on arrival really works."

Over 5 years' testing led to the development of these new Terramycin-fortified conditioning feeds. Tests with 30,000 cattle showed these results: **When used as prevention,** shipping fever losses were 80% less than with cattle on the same program *without* Terramycin.

When used as treatment for early stages, cases requiring expensive individual treatment were reduced by 83% with Terramycin.

The new feeds contain at least 500 grams of Terramycin per ton. They are specially formulated by feed manufacturers for high appetite appeal for calves. As little as two pounds per head per day for 5 days prevents *or* controls shipping fever complex . . . conditions animals for fast feedlot gains with your regular feeding program.

Just remember, for prevention of shipping fever or for fast treatment of early stages, get the high, disease-fighting levels of Terramycin in the new conditioning feeds. Use for only the first five days. Follow with the low, nutritional levels of Terramycin for the fast, low-cost gains.

CATTLEMEN COMMENTS

"Terramycin saved a lot of my animals and a lot more shrink. I received 335 head in poor condition, constipated and 40% with snotty noses. Trouble cleared up in 5 days' feeding of a conditioning feed containing Terramycin and only one animal required individual treatment."
Royal Krueger, Tracy, Minn.

"By the fourth day on Terramycin, steers were completely straightened out. No sign of shipping fever." **Carl H. Reinert, Cherokee, Iowa.**

"Treated calves with Terramycin on arrival. No shipping fever in the entire lot. Always had to treat 25-30 calves before."
Thorin Bros., Hills, Minn.

"First year we had no death loss. With Terramycin, cattle straightened out sooner and have done better since. No sickly animals which we normally could expect to have."
Reuben Griffith, Sac City, Iowa.

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Paul A. Nobbe; Waterloo, Ill.

This unretouched photograph taken on the farm of Paul A. Nobbe, Waterloo, Ill., reveals the extra years of life that Galvannealing* gives Red Brand fence.

Eight years ago, Mr. Nobbe put up some Red Brand. In one field, he spliced it to a new piece of ordinary galvanized fence.

This fence was not erected as a test of quality. But no test could have been more conclusive. Each roll of fence was regular dealer stock. They were erected by the same man. Spliced together, they had the same tension. They were exposed to the same weather and atmospheric conditions.

Eight years later, here's what Mr. Nobbe has to say: "I always liked Red Brand fence and thought it was better. But I never would have believed so great a difference would show up in eight years.

"Believe me, whenever I buy fence in the future it will be RED BRAND."

*Galvannealing is the exclusive Keystone process which fights rust by fusing a heavy coating of zinc right into the copper-bearing wire. Farmers know that Galvannealed Red Brand costs less because it lasts longer. For a lifetime investment, combine this fence with Red Brand Galvannealed barbed wire and Red Top® steel fence posts.

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How to allow for

Cattle

By Charles B. Brotherton
Agricultural Marketing Service
United States Department of Agriculture

You can shrink your cattle profits if you guess wrong on cattle shrinkage. This is especially true for producers who sell stockers or feeders at the ranch, farm, or some other local point.

The answer is to quit guessing. (1) Keep records on shrinkage experience and refer to them when you sell. (2) Keep these points in mind:

1. The highest *price per pound* doesn't necessarily mean the highest *profit per animal*. It depends upon how many pounds are counted. A lower price per pound on cattle as they stand can be more profitable than a higher pound price when the buyer is allowed to subtract too many pounds for shrinkage.

2. If you sell cattle with a pencil shrink and the cattle are weighed early in the morning, the buyer is getting the benefits of two weight shrinkages.

3. If animals are moved and weighed on scales away from the farm or ranch, the weight of the cattle shrinks some more. It's up to you to know how much and to allow for it. Shrinkage records do this.

4. Weighing away from the farm or ranch also involves certain incidental expenses—which you pay. You should allow for these expenses in considering a price offer.

Here are some guides on shrinkage:

- Buyers generally agree that the weight of the average animal will decrease from 3 to 4 percent if the animal has gone without food or water 8 to 12 hours. This is called excretory shrink—loss of belly fill. The buyer is allowing for this when he asks that the poundage of the animals be calculated, not at actual weight, but at estimated weight after an overnight stand in dry lot.
- Sometimes the buyer will put this another way. If this weighing condition can't be placed in the sales agreement, he may ask that the weight figure be reduced 3 to 4 percent to allow for the fill the animals are assumed to be carrying. This is called a pencil shrinkage. It is something for the producer to watch. Sometimes the pencil shrinkage asked is more than 3 to 4 percent—sometimes less. For example, it's generally agreed that if the animal has access to food and water during the night, its weight probably will be only 2 percent lighter, not 3 to 4 percent lighter, in the morning.
- If you are going to allow a pencil shrinkage or an estimated weight after an overnight stand, then you have to get enough additional money per pound to make up the difference in poundage. It's as simple as that.

shrinkage

It works out like this: Suppose a buyer offers you 20 cents a pound for 400-pound steer calves without a shrinkage allowance. Another buyer offers 20½ cents at a 4-percent pencil shrink. Which deal is more profitable?

The first offer means that you get 20 cents times 400 pounds—or $80 a head.

The second offer means that you get 20½ cents a pound—but now the calf is estimated to weigh only 384 pounds—because of the 4-percent shrink. And 20½ times 384 is only $78.22 per head.

Obviously, the extra 50 cents a hundred did not make up for the loss of poundage when you allowed a 4-percent pencil shrink. In this case, the lower price without shrink would have been more profitable.

These pencil shrinks are easy to figure. In general, the lower the price, the smaller the increase in price per pound needed to compensate for a shrinkage allowance. The higher the price, the larger should be the price increase to allow for shrinkage. For example, if you had been offered $22 a hundred *without* shrinkage, you would have had to ask $22.92 *with* shrinkage to be compensated adequately for a 4-percent shrink.

Here's how weighing cattle early in the morning can work against you.

A calf weighs, let's say, 408 pounds at night. Next morning when you weigh him out for sale his weight is down at least 2 percent due to loss of belly fill. He now weighs only 400 pounds, perhaps less. At $20.50 per hundred, that's a loss of $1.64 per head to start with. The buyer has already had the benefit of a 2-percent pencil shrink.

Now if you have agreed to a 4-percent pencil shrink in addition, the calf is counted—and paid for—as weighing only 384 pounds, although in a few hours his weight will be 408 pounds.

So the buyer gets the benefit of a double shrink.

You get—experience: Unless you remember to settle for a *price* that will allow for two shrinkages, not just one.

If the cattle are hauled off the farm for weighing, expect them to lose weight—possibly as much as 2 percent per hour for the first 2 hours.

That loss, of course, is still another natural shrinkage. Once again it cuts down the number of pounds for which you are going to be paid.

This shrinkage can't be prevented—but *it can be anticipated*. You can soon discover just how much it is likely to be by keeping shrinkage records, if you can weigh the cattle at the farm or ranch. Once you know this shrinkage you can make it up by adjusting the price.

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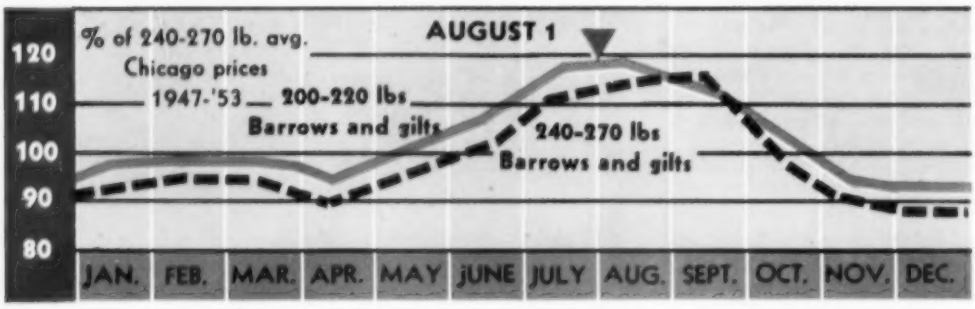
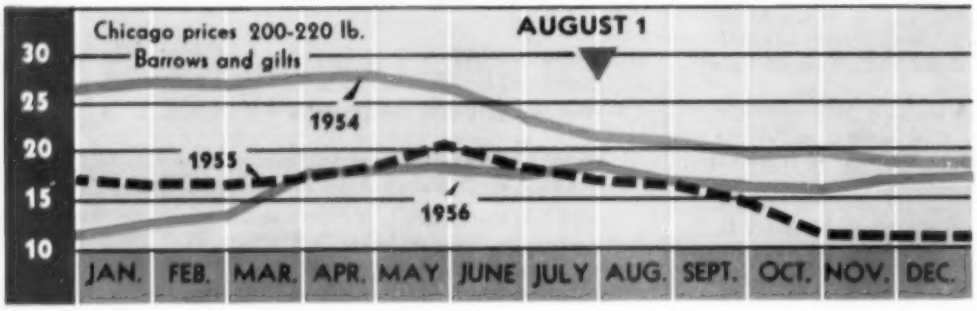
How to outguess the hog market this summer

By Wayne E. Swegle

Hog prices are near their high point for the year, according to averages



Of course, exact prices vary each year, as shown by the past 3 years' figures



What will be price trends the rest of 1957?

FRANCIS KUTISH, Iowa State College, says: I expect hog prices to begin trending downward sometime in August. Prices will remain above last year until late November or early December. The *amount* of price drop between now and mid-November will be about the same as a year ago. Prices won't show as sharp a rise as that of late November and December last year.

LARRY SIMERL, University of Illinois, believes: The facts available at this writing indicate that prices will decline normally. A normal decline is about 25 percent—spread out over about 4 months ending in November or early December. There's no reason to expect prices to break 50 percent as they did in 1955.

DOANE AGRICULTURAL SERVICE'S Research Department gives this outlook guide, month by month:

August price range—$18.25 to $19.50.
September price range—$16.25 to $17.50.
October price range—$16.00 to $17.25.
November price range—$15.00 to $16.00.
December price range—$14.50 to $15.50.

You'll note Doane researchers expect prices to break sharply from August to September and work on down to a low of $14.50-$15.50 in December. They say further, "August and September will witness discounts on 180- to 200-pound hogs. Heavy hog discounts won't be significant until November. They will continue through December."

So, what should you do if you now have fat hogs at around 200 pounds?

Kutish says, "If I had hogs approaching or over 200 pounds, I'd get them off to market, topping them out at 200 to 220 pounds. Pick out a day when the market is strong and let them go—because we often get fluctuations up and down this time of year.

"If your hogs are getting close, push 'em, even though cost per pound of gain goes up a bit."

Simerl adds that "sales of 180- to 200-pound weights may be advisable under *some* conditions—like when hog prices have held up for several weeks, and if further feeding requires purchase of corn at high prices. Hogs under 180 *should not be sold for slaughter*. Lightweights will be discounted." [*Turn to page 94*

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Outguess hog market

From page 92

What if you can't get hogs to market before the price falls?

Kutish has this good advice: "I repeat, get hogs off as fast as you can if you can hit the summer or early fall market. If I couldn't get my hogs sold by the latter part of October, at the latest, I'd follow a low-cost, slower gain type of feeding program. This is in preference to selling at the low time in November or December. While I don't look for as sharp an early winter price rise as a year ago, it should show some recovery from the late-fall low."

Looking further ahead, Kutish says, "I don't expect the 1958 winter and spring market to average as high as in 1957—because there will be more pigs on the market then than in the past winter and spring."

What about the possibility of selling lighter hogs as feeders now? Of this, Simerl says, "Pigs that will not reach market weight before November might be sold as feeders in August—if prices of slaughter hogs are at or near their summer high. But if the price of corn stays down, the hog-corn price ratio seems likely to be favorable all fall, so that some money may be made even on hogs sold near the season's low price.

"Pigs that are to be fed out for market in November or later should be put on least-cost rations, which have less protein supplement than rapid-gain rations," Simerl advises.

Doane researchers give us a comparison between selling a 50-pound feeder pig now for $18, and feeding him out for sale in November at 225 pounds. They assume in this example that corn costs $1.20 a bushel and the selling price of the hog in November would be $14.50 to $15.50 a hundred.

Value of 50-pound feeder pig now	$18.00
Feed costs to take him to 225 pounds:	
Corn . . . . . 12.5 bu. x $1.20=	$15.00
Protein . . . . . 85 lb. x .045=	3.83
Total feed cost	$18.83
Total cost of 225-pound hog	$36.83

Price needed per pound to break even is

$$\frac{\text{Total cost}}{\text{Sales weight}} \text{ or } \frac{\$36.83}{225 \text{ lbs.}} = \$16.37$$

No allowance is made for death loss, veterinary expenses, or marketing costs.

So, if you expect a selling price in November of $14.50 to $15.50, and your break-even price is $16.37, your best bet is to sell the 50-pound feeder pig now at $18.

Consider the possibility of selling feeder pigs—with your own figures.

August

This is the nooning of the year;
The sultry sun is high;
The windmill droops its shining head
Against a coppery sky;
Like fleecy flocks in azure fields,
The white clouds wander by.

The frogs beside the pasture pool
Have sought the sun-shot deep;
The fields, in drowsy somnolence,
Their soft siesta keep;
Almost I think that I can hear
Them breathing in their sleep.

Ah, well may nature nap at noon
Before the day is late;
For afternoon is coming soon,
With crops to consummate,
And fruit to hang where robins sang,
And trees to decorate!

—**Gwennie James**

Invincible

It can be proven, Bumblebee,
You cannot fly successfully
With wings so small, but fly you do,
Ignoring data! So man, too,
When free of doubt or question,
Does grandly what cannot be done.

—**Elaine V. Emans**

QUIZ TIME AT "GRAND OLE OPRY"

Rose Maddox asks Faron Young and Hank Snow:

R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

According to Faron Young: "P.A. in a pipe is cool, mild comfort. It's got honest-to-goodness natural tobacco taste! It's P.A. for me!"

Roll-your-owner Hank Snow's side of the story is simple, too. "P.A. rolls up neat and easy because it's crimp cut. Smokes mild and tasty!"

Naturally tasty...mild, cool smoking...always fresh!

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With the extra large ninety-eight square inch throat opening, the Papec "32A" will handle up to 25 tons of silage or up to 5 tons of dry hay per hour. Gets crops in fast and easy.

The Papec Quick-Change mechanism makes it a boy's job to switch from one attachment to another. Other Papec features include Adjustable Axles . . . Patented Silage Shelf . . . Side and Rear Feed Delivery at no extra cost . . . Automatic Delivery Pipe Control . . . Adjustable Hay Pick-up Fingers.

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Laughing at Life

Blessed Saturday

Teacher: "This is the fifth time I've had to punish you this week. What have you to say for yourself?"
Little Bob: "I'm glad it's Friday."

Well-taut Facts

Slacks are not advisable
For women who are sizable.
—Hal Chadwick

And It Won't Come Back

What exasperates us mortals most about opportunity is that it always looks a lot bigger going than coming.

A Job We'd Like

A man who had become ill while working in his office was rushed to a hospital. His boss, visiting him, consoled the man thus: "Now Dave, don't you worry. Everyone at the office is going to pitch in and do your work—as soon as we can figure out just what you've been doing."

You Pay Either Way

It is now so simple to purchase on the installment plan that it's foolish to marry for money.—Leland Wise.

Sound Judgment

Of bedtime perplexities,
This is the worst:
The one who snores loudest
Gets to sleep first.
—Stephen Schlitzer

Any Way to Get the Money

Bids . . . must be accompanied by a cashier's or certified check or bank theft in the amount of $29,500.—*Lake City (Minnesota) Graphic.*

And Ready for a Sale

Women are a lot like ships. If kept in good shape and painted occasionally, they stay see-worthy.—Jack Herbert.

"Even the cows get off the place more than I do."

for a lifetime of shooting—buy a

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action pictures prove

—that in less than 3/5 of a second a hunter can raise and fire a superbly balanced Model 12. Speed? You bet! The kind you must have for fast, fleet game.

25 wear adjustments

Tough Winchester Proof-Steel, machined to exact dimensions gives you years of extra use before any take-up is necessary. Then you can make a slight adjustment and get years more. *No Model 12 has ever used all the adjustment available!* Tough? And how!

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Getz Farms, Kirklin, Indiana, uses Penta pressure-treated* fence posts. Clean and easy to handle, even in hot weather, Penta-treated posts resist termites and rot, last years longer. They save money because they cut replacements to a minimum.

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☐ Information on low-cost PENTA-treated pole buildings.

☐ I am interested in pole-type buildings for _____

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Lazy-Susan silage feeder

Art Briggs, Neponset, Illinois, is saving backbreaking labor and lots of time feeding his 51 head of steers on silage by using a unique, commercially built feed bunk which encircles his upright silo.

"The unit cost me about $800," Briggs explains, "but it has cut my feeding time from 1½ hours to 20 minutes. I could cut the work out almost entirely with a silo unloader."

The unit encircles the silo and is turned by an electric motor underneath. The motor drives an automobile-type wheel with inflated tire, which in turn, slowly turns the steel bunk. It will accommodate 45 head of cattle at one time.

The steel trough, 24″ wide by 14″ deep, turns on rollers underneath. A stationary top U-shaped inverted guard protects cattle's necks from rubbing on the turning unit.

Briggs throws the silage down by hand from the silo, then opens a side door from the silage house and pushes it out into the revolving bunk until it is full.

The mounting legs that hold the trough can be adjusted for higher or lower distances from the ground, depending on whether young stock or older animals are being fed.

Scales, grades

both needed in selecting feeder cattle

The myth of rapid beef gains being tied to coarser, poorer grading cattle was exposed recently at the Illinois Dixon Spring Experiment Station when photographs were to be taken of cattle to show differences other than size between rapid and slow gainers. The perfect group for this picture story was 26 head of yearling bulls on performance-testing.

Since weaning a year ago, these bulls had been fed together at the same bunk and had grazed on the same pasture. As was expected they did have wide differences in grades. But researchers were stymied when they tried to pick animals for the pictures. The rapid gainers ran the complete scale of grades, just as the slow gainers. As a result, no pictures.

The average gain of these bulls during the past year was 473 pounds. Twelve gained more than average and 14 less. There was no difference in the average grade score between the top 12 gainers and the bottom 14. An identical spread from High to Low grade was found in both groups. Researchers point out this means scales and the grader's book are both important in finding profitable cattle.

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Now you can take the slump out of summer egg marketing with extra-production laying feeds containing Terramycin. And, as added bonus, you'll profit from Terramycin's proven benefits as shown in these university and commercial laying-flock tests:

ARIZONA—Uniform high production in hot weather. On June 1, a commercial flockowner started a Terramycin trial with January-hatch Leghorns. Twelve-month records show that 2,300 birds fed extra Terramycin produced 29 more eggs on .17 lb. less feed per dozen eggs for 68¢ more net profit per bird.

TEXAS—Increased feed efficiency. Terramycin-fed birds in this college test produced a dozen eggs on .66 lb. less feed for an increase of 11.8% in feed efficiency. Average increased efficiency in 15 other college tests: 14.3%.

SOUTH CAROLINA—More profit over feed costs. On the basis of 1,000 birds this college test produced 4,270 extra dozens of eggs. With eggs at 30¢ per dozen, the extra profit over feed costs was $231.00. Average increase in profits in other college tests: $512.22 per 1,000 birds.

These new feeds are simple to use. There's no extra labor, fuss or upsets of feeding programs with extra-production feeds containing Terramycin. Just look for Terramycin on the tag. Or ask your favorite feed dealer for his extra-production laying feed containing Terramycin. And continue feeding your regular program as before.

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BRAND OF OXYTETRACYCLINE

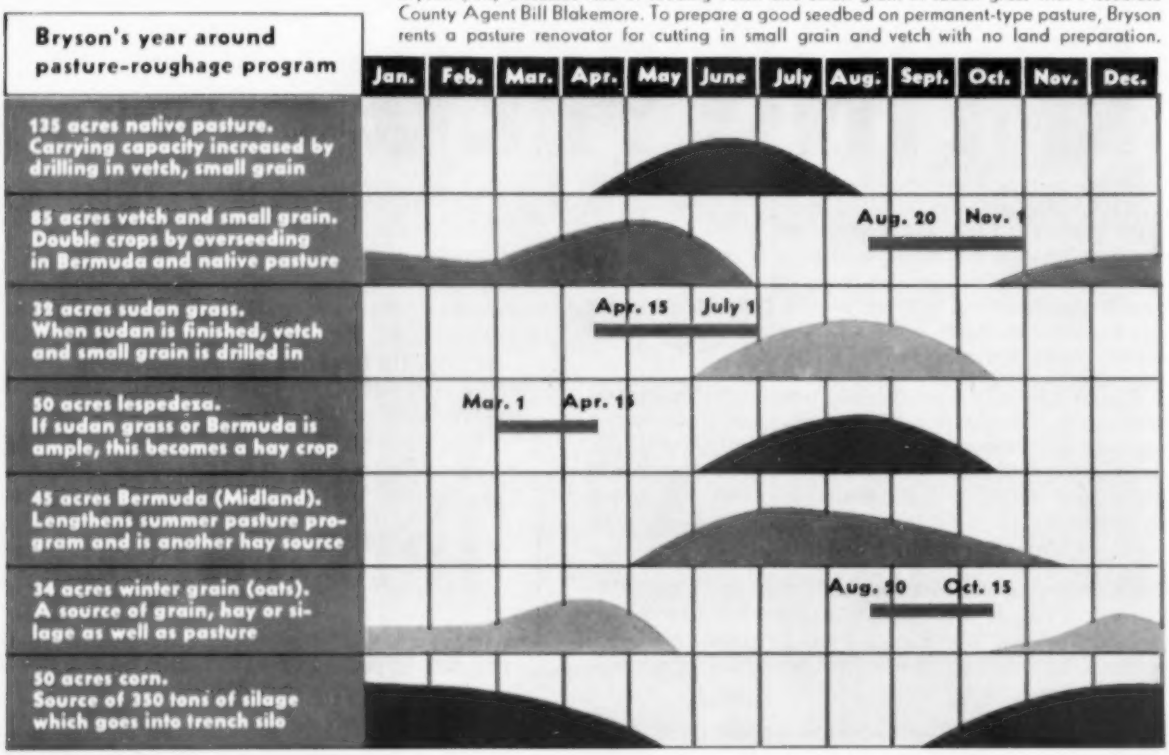
NEW WAY TO GET MORE EGGS

Chas. Pfizer & Co., Inc.
World's largest producer of antibiotics
Brooklyn 6, N. Y.

Pfizer

Photographs: Hawks

Bryson (left) discusses rate of seeding vetch and small grain in sudan grass with Associate County Agent Bill Blakemore. To prepare a good seedbed on permanent-type pasture, Bryson rents a pasture renovator for cutting in small grain and vetch with no land preparation.



He cut his feed cost ONE FOURTH

By growing recommended pasture plants and quality roughages, this Tulsa County, Oklahoma, dairyman saved 32 tons of grain-protein last year. And his 30-cow herd produced more

By Mike O'Hara

When profits are slim, a dairyman doesn't like to be accused of overfeeding his cows—especially by a young agriculture extension worker. But the remark did cause Fred Bryson, dairyman of Tulsa County, Oklahoma, to completely revise his feeding program.

Fred was busily feeding his cows grain and about ready to start milking when Associate County Agent Bill Blakemore walked in. He noticed Bryson was feeding 1½ to 2 gallons of feed (twice daily) to cows which were averaging about 30 pounds of milk daily.

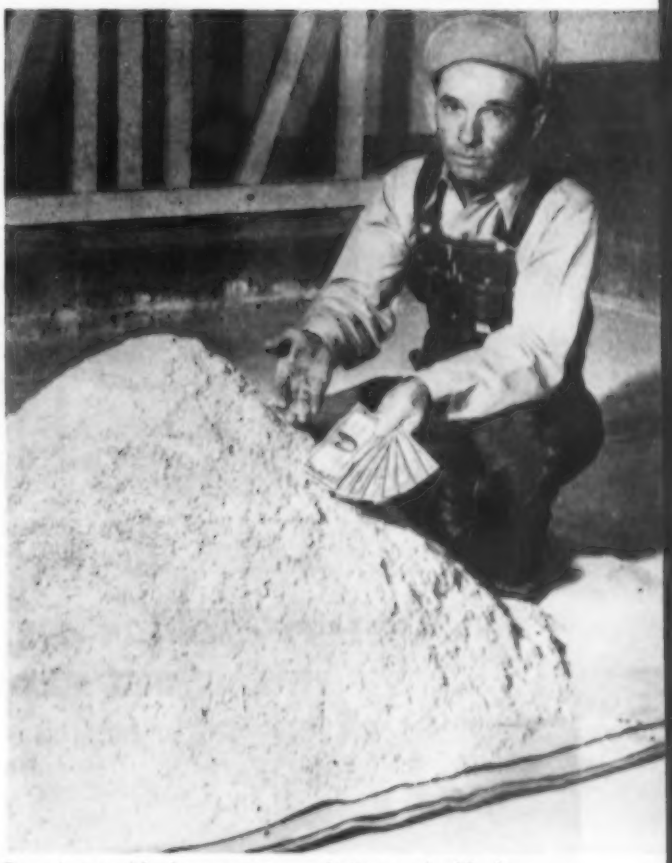
Making a quick mental computation, County Agent Blakemore cautioned Bryson that he was feeding too much grain. But Bryson wanted facts—not opinions—and the agent did some figuring while Bryson finished milking.

Using data available in Morrison's *Feeds and Feeding*, and a work-sheet guide for dairy rations, Agent Blakemore computed the digestible protein and energy requirements of an average cow in Bryson's herd:

	Digestible protein (lbs.)	Energy (lbs.)
Maintenance requirements for 1,150-pound cow	.73	7.2
Requirements for 31# 3.5% milk	1.43	8.68
Total for body maintenance and milk	2.16	15.88

Then, using a similar approach, he figured the digestible protein and energy content of grain mixture:

	Number lbs.	Digestible protein (lbs.)	Energy (lbs.)
Barley	2,300	230	1,842.3
Milo	1,000	88	779.0
Oats	1,000	94	721.0
Bran	400	54.8	268.8
Cottonseed meal	800	262.4	564.8
Total	5,500	729.2	4,175.9
Percentage		13.3	75.9



Bryson's revised feeding program saved 217 pounds of feed each day—a saving of more than $8 as shown above. On a yearly basis, this totals more than 65,000 pounds of grain-protein supplement costing $1,790—now replaced with quality roughage and pasture. (See chart on opposite page.)

With this information and the average composition of his roughage, the agent figured the total digestible protein and energy Bryson was feeding his cows. This was the total ration:

	Number pounds	Digestible protein (lbs.)	Energy (lbs.)
Grain-protein supplement	16	2.12	12.13
Alfalfa hay	10	1.05	4.10
Prairie hay	8	.16	2.97
Silage, sorghum	36	.28	4.39
Total	70	3.61	23.59
Actual requirements		2.16	15.88
Amount of overfeeding		1.45	8.71

When the milking was done, Blakemore went over the above figures with Bryson, explaining why he thought the cows were receiving [*Turn to page 102*

"I MADE $2,000 PROFIT IN 2½ MONTHS WITH QUONSET® GRAIN STORAGE,"

says D. L. Voss of Matthews, Missouri

Quonset grain storage lets you sell when the market price is best for bonus profits.

D. L. Voss cashed in on this big Quonset benefit in a hurry. He reports, "I stored 5,000 bushels of No. 1 soybeans in my Quonset and sold them on a rising market 2½ months later for a $2,000 profit."

Mr. Voss owns *two* Quonsets. When they're not needed for grain storage, Mr. Voss stores machinery in them. He particularly likes their wide, high-clearance doors and clear-span interiors for easier handling of equipment.

These same advantages and profits can be yours. See your nearby Quonset dealer now! Or send coupon for complete information.

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☐ Rush me your illustrated 24-page catalog "Quonset Buildings for Every Farm Use."

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He cut feed cost

From page 101

too much grain and protein. In fact, he thought the protein supplement and bran could be eliminated from the ration altogether. The agent suggested this ration:

	Number pounds	Digestible protein (lbs.)	Energy (lbs.)
Barley	100	10.0	80.1
Oats	100	9.4	72.1
Total	200	19.4	152.2
Percentage		9.7	76.1

Then he figured the digestible protein and energy in the total revised ration:

	Number pounds	Digestible protein (lbs.)	Energy (lbs.)
Grain	9	.873	6.85
Alfalfa hay	8	.840	3.28
Oats/hay	8	.392	3.10
Corn silage	45	.360	5.49
Total	70	2.465	18.72

Skeptical of the outcome of trading 16 pounds of grain-protein for 9 pounds straight grain, Bryson agreed to gradually lower his feeding program on all but 3 cows. If production of the rest of the herd fell and these 3 held up, then he had proved the agent wrong. If the production held up on the cows receiving less grain, he would have proved that the cows couldn't utilize the extra grain-protein. Comparison of production-testing records showed no significant difference.

Later, Bryson learned that Agent Blakemore had surveyed 17 Tulsa County dairies milking a total of 448 cows and found all but one were overfeeding the cows digestible protein. One dairyman was feeding almost a pound of grain for each pound of milk. And by changing his ration he could have saved 30 cents per hundredweight on the cost of the grain mixture.

Liking the way Blakemore figured, Bryson decided to join the Farm and Home Development program—the very thing the county agent wanted to talk to him about the day he figured the ration.

On these pilot farms, an agriculture extension agent works closely with 40 to 50 families, helping them use the latest and most scientific knowledge available to bring about the greatest economic return. This management service aids both the farm and the home. The goal: greater farm profits and happier home life.

Bryson has built storage facilities to hold his grain requirements from one harvest to the next. Last fall he bought 1,200 bushels of oats and the same amount of barley at harvest time. His neighbors, allowing for shrinkage, sold their grain for 5 cents less than the prevailing "support price." This represents a saving of more than $600 during the year.

Making the best possible use of his land, Bryson grows corn for silage on rented bottom land which is more fertile than his farm land. This leaves his farm for a rotation of grasses, legumes, and small grains (see chart, page 100).

"faster trips..and our cattle stays heavier with EATON-2 SPEED AXLES"

—says farmer **WAYNE LOOMIS,**
LEROY G. LOOMIS & SONS, ONAWA, IOWA

"Unless we get our cattle to the commission markets in Sioux City and Omaha quickly, we can lose up to $35 a head from weight-loss," reports Mr. Loomis. "Thanks to the Eaton 2-Speed Axles on our GMC trucks, there's no delay. We get in and out of tight spots fast, take all kinds of roads and weather conditions without a breakdown.

"We've used Eaton 2-Speed Axles for over ten years. In more than a half-million miles of travel, we've never had a maintenance problem—never spent a nickel on an Eaton. And our Eaton 2-Speeds get plenty of work here on our 1,000 acres, hauling through muddy bottom land and carrying tractors and combines to our other farms in Highmore, South Dakota, 325 miles away.

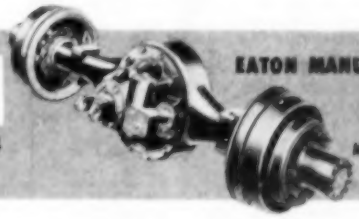
"Other axles we've tried didn't compare in efficiency to the Eaton 2-Speed. Pulling through soft, slippery earth or on stiff grades, Eaton's low-gear range comes through with plenty of pulling power. On the highway we can haul full payloads at top legal speeds—yet engine strain and gasoline costs are at the minimum. Soon we're going to get a tractor-trailer combination. But we won't take it unless it's equipped with an Eaton 2-Speed Axle."

Whether you farm 50 acres or 5,000, an Eaton 2-Speed can save you money, and speed your work. Ask your truck dealer today for a demonstration.

"TRAVELING LIVESTOCK can lose weight quickly," says Mr. Loomis, "unless they are handled carefully. The Eaton 2-Speed assures us of safer, smoother trips. Shifting is quick and gentle with an Eaton—there's less chance of bruising the cattle, and a trip is less tiring to the driver."

"TRUCK OPERATORS KNOW there is no other axle that equals an Eaton 2-Speed for service and dependability," remarks Cliff Heald, truck sales manager, C. J. Murray & Co., GMC dealers in Sioux City. "In fact, our customers know the money-saving value of an Eaton Axle and need no selling from us."

EATON
2-SPEED TRUCK AXLES



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MORE THAN 2 MILLION EATON AXLES IN TRUCKS TODAY

What you can do now to get

100 OR MORE BUSHELS OF CORN PER ACRE...next year

Every day, an acre of growing corn needs—and takes out of the soil—*nearly three pounds of nitrogen!*

Right now, your crop may not be able to get all the necessary nitrogen—and other important nutrients—from the depleted soil. Result: your yield this year may be less than 100 bushels per acre.

Now is the time to find out if your corn is *hungry* for these elements. If your corn shows signs of nutrient deficiency, your next step is a soil test . . . to tell you just what is needed to replenish the soil.

Nitrogen applied at fall plowing helps break down organic matter and enriches the soil. This will help to insure high yields next season.

Act now to get 100 or more bushels per acre—next year. Your County Agent and local fertilizer distributor have handy illustrated guides showing nutrient deficiencies for corn or—write us directly for your copy

Dino, the Sinclair Dinosaur, says,

"Fertilize for greater farm profits."

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Ground alfalfa

valuable in swine ration

Swine growers may be overlooking the value of ground-alfalfa hay in feeding out their hogs, reports Mel Hazaleus, animal-husbandry professor at Colorado State University.

A grower located reasonably close (40 or 50 miles) to pelleting facilities can use as much as 50-percent ground alfalfa in a pelleted fattening ration and expect good results, Hazaleus says. And the grower can even feed up to 30-percent ground alfalfa in an unpelleted ration and still fare pretty well.

Hazaleus bases his statements on second-year results with 5 experimental lots of hogs fed out at Colorado State University in 1956.

Highest gross profit per pig was $6.20, figuring the average selling price to be $15.75 per hundredweight. This figure was chalked up by a lot given a pelleted ration consisting of 50-percent good quality ground-alfalfa hay, plus equal parts of corn and grain sorghums.

A second lot fed a pelleted ration of 30-percent ground alfalfa plus equal parts of corn and grain sorghum, returned a gross profit per pig of $5.93. The profit dropped to $3.48 when 30-percent alfalfa was used with equal parts of corn and grain sorghum in pellet forms.

Another lot fed an unpelleted ration of 10-percent ground-alfalfa hay plus equal parts of corn and grain sorghum chalked up a gross profit per pig of $5.32.

Going to 50-percent ground-alfalfa hay in an unpelleted ration that also contained equal parts of corn and grain sorghum, returned only 60 cents gross profit per pig. The 50-percent hay apparently results in too much roughage in the ration and permits too much wasted feed when it is not pelleted, Hazaleus points out.

Hazaleus points out that some growers who raise their own alfalfa or who are close to a good source of supply may be able to lower their cost of hay by $1 to $2 per ton. If they can grind their own hay and are close to pelleting facilities, they're in a good spot to make increased use of the ground hay in the ration.

Hazaleus emphasizes that hay should be ground with a quarter-inch screen, finer than that commonly used in grinding alfalfa for other livestock.

Devastating Energy

What explodes with greater force
Than atom bombs?—
Little boys of three, of course . . .
Just ask their moms!

—**Ruth Chadwick**

In recognition of his sound livestock and soil building program and his outstanding record of community service and leadership, Mr. Sunde this year received the coveted award of Master Farmer.

"2.64 pounds of feed per pound of gain."

"*Even though MoorMan's Mintrates may seem high priced,* the results they produce pay out for us in terms of low-cost meat, milk and eggs," says Elvin Sunde, *Master Farmer,* Emmett County, Iowa. "We ought to know, we've been MoorMan customers for 15 years—use Mintrates* for all our livestock and poultry.

"*Here are figures on a recent lot of 302 hogs,* that averaged 218 pounds at market. Our total out-of-pocket feed cost for the lot, which includes worming and vaccination as well as Mintrates, came to only $6.49 a hog, or $2.98 a hundred pounds of gain. The feed conversion rate on the lot was 2.64 pounds of total feed per pound of gain. This includes our own corn as well as the Mintrates.

"*I believe* this illustrates as well as anything what I mean by Mintrate feeding paying out."

Like Mr. Sunde, thousands of hog raisers have found that Mintrates are the secret of rapid low-cost pork production. Swing your barnyard gate wide open for your MoorMan Man when he calls. Ask him for an estimate on how much it will cost to take your pigs to market the Mintrate way. If you want more profit from pigs, he's a good man to know. Or drop a post card to Moorman Mfg. Co., Dept. R78, Quincy, Ill., for details.

"...for 15 years I've always swung my barnyard gate wide open to my MoorMan Man... he's a good man to know."

Mr. Sunde says: "Our MoorMan Man, Lewis Heggen, started us on MoorMan's 15 years ago. We're convinced that even though MoorMan's Mintrates may seem high priced, the results they produce pay out in terms of low-cost meat, milk and eggs. By following MoorMan recommendations we're able to make better use of our home-grown feeds."

MoorMan's*

Since 1885—72 Years of Friendly Service

Mintrates for Pigs and Hogs

—mineralized protein and vitamin concentrates that help hogs make more economical gains.

*Trademark Reg. U.S. Pat. Off.

The wheat that modernized a kitchen

The Harveys like to say that their wheat "did over" their kitchen. They put part of every wheat crop into Series "E" Savings Bonds. Very soon, they had more than enough money for their new, modern kitchen.

You can make *your* dream come true the Savings Bonds way. Three dollars put into Series "E" now, grow to four in nine years and eight months! Unlike cash, your Savings Bonds can be replaced if lost, burned or stolen.

You may buy Series "E" automatically from your bank account. Or, ask about Series "H" if you wish to receive your interest by check every six months. You invest in your and your country's future when you buy Savings Bonds.

The crop that never fails

U. S. Savings Bonds

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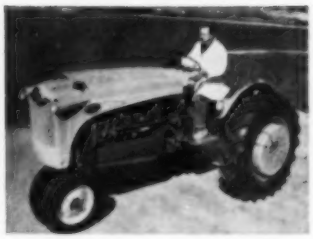
MAGAZINE PUBLISHERS OF AMERICA

How the free-piston turbine engine works

The free-piston turbine engine is a "natural" for a farm tractor power plant. The following information and the detailed drawing show you why

By S. S. DeForest



I had the opportunity to watch a demonstration of a tractor with a free-piston turbine engine!

It wasn't a production model but it was evident we might be seeing production models in a few years. Why? Because this type of power plant is so well applied, apparently, to farm machinery.

When you first see this tractor, you're impressed with the tanklike mass of "iron" under the hood. Most of this is the *gasifier* and related parts to make it operate. It is the free-piston part of the engine with a primary function to prepare the gases for operating a 6″ turbine, almost lost under the mass. The *gas turbine* is geared through a gear box and 10-speed transmission to the wheels of the tractor. It turns up to 45,000 rpm at maximum power to provide about 50 hp for this tractor.

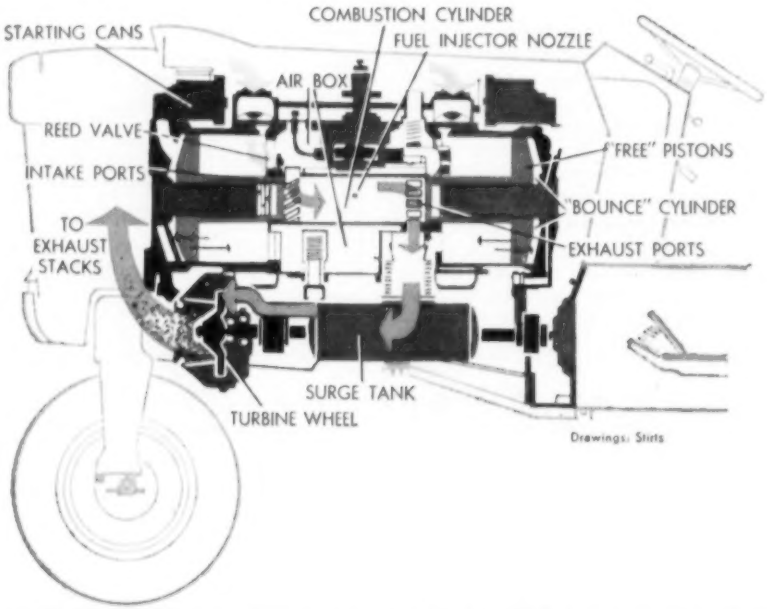
To start this engine you first create a vacuum, with a vacuum pump, in the bounce cylinders behind the odd-shaped pistons (as compared to the shape we normally consider pistons to be) to pull them apart. Then you push the prime button, release compressed air from starting cans and the pistons are forced together. The fuel ignites and the engine starts! The starting cans are immediately recharged by the air-compressor side of the pistons—opposite side from the bounce cylinder.

Advantages of this engine are many. Most important are: There's no vibration because the two pistons counteract each other at all times. Fuel consumption is about the same as with a diesel engine, there's only one fuel injector and no valve mechanism. Maintenance should be easy and minimum. But most interesting are the load characteristics of this engine and its future possibilities.

You've noticed as you've plowed with your conventional gasoline or diesel tractor that when you hit a tough spot, the engine will "lug down." When the rpm falls off more, torque falls off rapidly

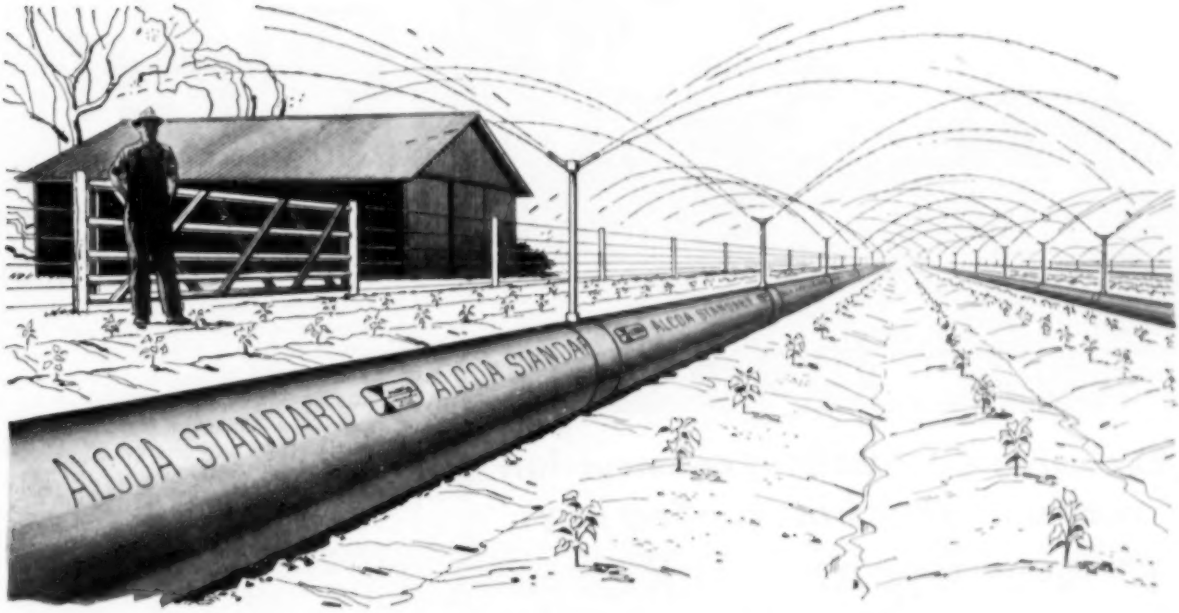
Turn to page 108

Here's how the free-piston turbine engine works



Drawings: Stirts

Air in bounce cylinders forces pistons inward, puts air in air box. Injected fuel ignites, forces pistons out. Gases leave through exhaust ports to surge tank and turbine. Next air charge enters from air box, scavenges cylinder. Pistons now ready for next stroke.



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Alcoa Irrigation Pipe . . . for profitable fall irrigation

Irrigation can pay you big dividends from now until winter in most areas. Fall legumes, pastures and grain crops all respond with bonus yields when irrigated. Alcoa offers you three quality irrigation pipes to help you increase crop production the year around. Each pipe is built to fit a specific need. Alcoa® Standard, a seamless extruded pipe, is designed for heavy-duty work . . . long hauls, high pressures, rough handling.

Alcoa Lite-Line, a new lower cost Alcoa farm product, is available either as a seamless or a welded pipe, depending on your particular requirement. Alcoa Lite-Line is built to render full service for most normal irrigation needs. For either of the new pipes, or for Alcoa Standard, see your local dealer. He can provide expert local engineering service.

Alcoa Aluminum Gates . . . for efficient livestock handling

The Alcoa Gate is built like a bridge, built to last. You can count on it . . . it won't rust, rot, warp or sag. That means lasting efficiency for you in handling your livestock. It reduces maintenance chores. Alcoa Gates come in widths for openings of 10 ft, 12 ft, 14 ft and 16 ft, five or six panels, 52 inches high. A special hog gate 36 inches high also is available.

Alcoa Aluminum Roofing . . . for lower cost farm buildings

Pole buildings with Alcoa Aluminum Roofing and Siding can save you up to 75% in materials and labor costs as compared to conventional building construction. And Alcoa Aluminum Roofing gives you additional benefits. It keeps your livestock more comfortable, producing better, because it reflects the sun's heat—keeps your buildings up to 15° cooler in summer. It holds heat in during winter. It is maintenance-free, never requires painting. Alcoa Roofing is available in lap-saving, 48-inch or standard 26-inch sheets. See your farm supply, lumber or hardware dealer, or send for Alcoa's free pole building catalog.

Your Guide to the Best in Aluminum Value

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THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
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Please send free information on: ☐ Alcoa Irrigation Pipe, ☐ Alcoa Farm Gates, ☐ Alcoa Pole Building Plans

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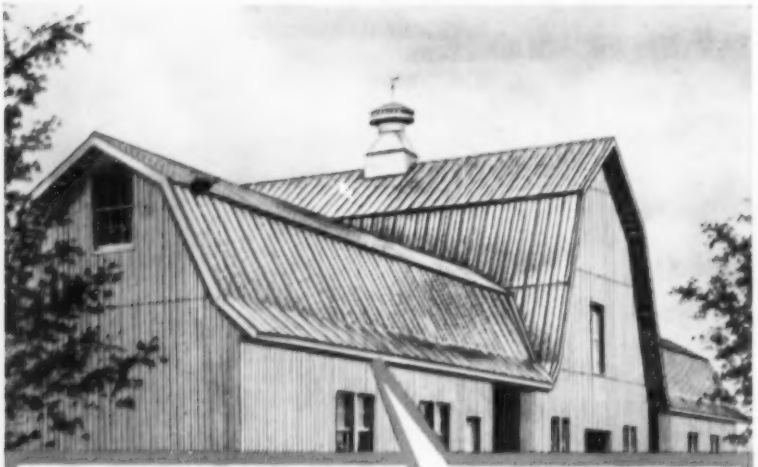

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You're sure of years and years of maintenance-free protection with a Wheeling Channeldrain roof. Look at these exclusive features: (1) Heavy zinc coating over Cop-R-Loy steel for added rust-resistance; (2) Extra lap for greater strength, and (3) Drain channel for greater storm protection.

Putting up a new roof? Repairing an old one? See your Wheeling dealer for Channeldrain roofing and accessories, corrugated siding sheets, downspouts and gutters.

Wheeling

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IT'S WHEELING STEEL

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Ideas you can use

. . . in your farm home

Timely, educational, and enjoyable—these authoritative home furnishings filmstrips offer practical help and new ideas on remodeling and home decorating. Produced by the editors of *Successful Farming* magazine, these popular filmstrips are ideal for club groups, 4-H and extension projects, classes, and other general farm meetings.

Look over this list of *Successful Farming* filmstrips and order your prints today! They're economically priced, and can be shown on any 35 mm filmstrip projector.

PLANNING YOUR FARM KITCHEN presents an educational, entertaining answer to one of today's most prevalent home decorating problems . . . how to plan or remodel a kitchen so that it is an efficient work area, and a pleasant center for family living. It is packed with practical information on every phase of kitchen planning and decorating.

In addition to showing many well-planned kitchens, the filmstrip shows how one typical young farm couple planned and built their efficient new kitchen-family living center. There are dozens of helpful ideas for a new kitchen, remodeling an old one, or buying new appliances.

The complete package includes the 64-frame, full-color filmstrip, 33⅓ rpm synchronized recorded commentary, and printed commentary and program ideas—just $9.95. Running time, 16 minutes.

MAKE YOURS A WELL-DRESSED HOME answers all the basic questions of home decorating a woman might ask. It shows her how to dress her home as correctly as she does herself. Package includes 81-frame, full-color filmstrip, (20 minutes running time), 33⅓ rpm recorded commentary, printed commentary, program notes and study guides. Only $9.50.

RECIPE FOR COLOR is a guide to color magic in home decorating. It shows how to build color schemes, and combine colors in pleasing proportions. The full-color, 33-frame filmstrip (30 minutes running time) comes with printed commentary and one dozen copies of a 12-page booklet. It sells for only $3.95.

To order filmstrips, or to request more information, write: *Successful Farming* Dept. 1108, Des Moines 3, Iowa.

Free-piston turbine

From page 106

and the engine quickly stalls if you don't disengage the clutch.

The torque characteristics of the free-piston turbine engine are different. As this engine is loaded down, the turbine slows down but the torque remains about the same and actually rises to get you through the tough area.

Another characteristic is interesting. Often your tractor is required to adjust rapidly for changes in power requirements, as in chopping or baling hay. The 6″ turbine can go from idle rpm to full power rpm in *just one cycle of the free pistons*. The small turbine has much less mass to make this quick adjustment than the traditional heavy engines.

The gasifier on the experimental tractor, though capable of 100 hp, was derated to 50. This means it has extra air-compressor capacity available for uses other than what is needed to run the turbine. This engine has flexibility not possible with engines as we know them today. It might be conceivable that you could connect air hoses from this "air compressor" to additional turbines for operating moving parts on trailing implements. You could individually control, for example, the shaker mechanism, cylinder, and cutter bar on your combine without having tractor ground speed, or any one of the adjustments affect the others.

When you will be able to buy a tractor with a free-piston gas turbine engine is problematical. The engineers who demonstrated the one I saw said a lot would depend on the developments made in the next few years on engines of the type you now use in your tractor. In other words, we can't compare the free-piston turbine engine with the engines as we know them now but with the engines as they will be several years from now.

Safety cue

His glove was big, his sleeve was loose,
So danger came around to flirt;
Good fortune this time spared his arm
But now he wears a shredded shirt.

SYNOVEX® *from* SQUIBB

higher weight gains at lower cost per lb. of gain and...

no downgrading of carcass quality

Nick through skin of ear with special scalpel, insert tip of implanter, press plunger to eject all 6 pellets of Synovex.

TEST AFTER TEST, FEEDLOT AFTER FEEDLOT, performance figures tell the same story: *steers implanted with Synovex return a higher profit to the feeder.*

SAVE UP TO 5c PER LB. OF GAIN. Minutes after you implant a steer with Synovex, two highly potent naturally occurring hormones start their journey into the bloodstream. By a scientific "stirring up" of the hormone balance, Synovex accelerates the enzyme activity in every cell of the steer's body. The result is a remarkable increase in appetite, feed intake and feed efficiency. Feed conversion is improved as much as 20% with *no downgrading of carcass quality.*

- **SYNOVEX** has improved rate of gain up to 50% over Stilbestrol.*
- **SYNOVEX** implanted steers grade out fully as well as non-implanted. Carcass shrink is normal, flesh well marbled.
- **SYNOVEX** makes unnecessary the storage and handling of special feeds with hormone products added.
- **SYNOVEX** is recommended for steers weighing from 400 to 1000 lbs., and one implant lasts a full 150 days.

FREE! NEW "SYNOVEX SYNOPSIS" containing recent test results, performance data, etc., for Synovex vs. Stilbestrol and controls. Get all the facts! Your copy is ready for you at SQUIBB, *Veterinary Products Department,* 745 Fifth Ave., New York 22, N. Y. Write today!

ASK YOUR VETERINARIAN ABOUT SYNOVEX IN 10-IMPLANT AND 100-IMPLANT PACKAGES.

SYNOVEX is a registered Squibb trademark. Synovex has been cooperatively developed by E. R. Squibb and Sons and Syntex.

*R. J. Deans, W. J. Van Arsdell, E. P. Reineke and L. J. Bratzler (Michigan Agricultural Experiment Station): The Effect of Progesterone-Estradiol Implants and Stilbestrol Feeding on Feed Lot Performance and Carcass Characteristics of Steers, *Journ. Animal Sci.* 15:1020, 1956.

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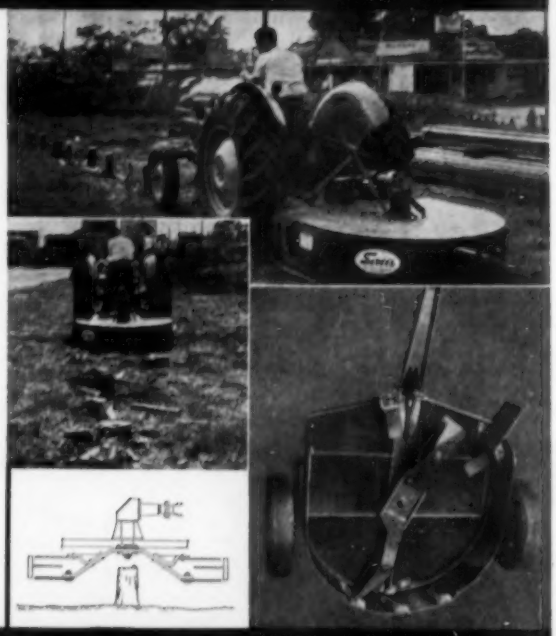
Servis GYRO takes on anything!

Pulverizes 4"x 4" posts

Unretouched photos demonstrate Servis Gyro's rugged brush cutting ability. Here a production line Gyro 57 shatters a row of 4"x 4" fence posts with ease.

Shreds thickest stands of cotton and grain stalks

Superior shredding results from patented intermeshing blades and powerful Gyro action. Dual and fan-type blades are optional.



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offer light weight, real economy, low price.

New SC-80 Mower (right), belt driven, features twin rotary blades, cuts 80" swath. E-60 Clipper (lower right) cuts 60" swath. Lighter than Gyros for economy, it features same heavy duty gears and bearings for long life. Both convert to lift-type models.

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Make Pay Dirt Pay More . . . Join Your Soil Conservation District

Veterinary

Summer foot rot

Foot rot sometimes appears in cattle on pasture during the dry summer months when the animals have had no chance to come in contact with mud or filthy lots. This fact encourages the belief there may be more than one cause, and two or more types of foot rot affecting cattle.

Many of these cases can be prevented by making the animals walk through 3 or 4 inches of hydrated lime at least once daily. This can be done by putting the lime in a shallow box about 2 feet wide, 8 inches deep, and 10 feet long and placing the box in a narrow gate or doorway that the cattle will have to use in getting to feed or water.

The treatment can be made more effective by mixing 5 pounds of powdered copper sulfate with every 100 pounds of lime. The box will require occasional cleaning and frequent addition of lime.

Don't make calves reach!

We were interested in reading a report of a barn full of sick calves that had been treated for some time with antibiotics and various drugs without doing them much good. When a pathologist examined a sample of lung tissue, he diagnosed the trouble as lipoid pneumonia due to the inhalation of fats.

This condition was believed made possible by holding the pails too high at feeding time, resulting in an extended neck and the drawing of some milk and fat globules into the calves' lungs.

The owner then bored a hole in the side of each calf pen at about the level of a cow's teat. Using a nipple pail, the nipple was inserted in the hole, and all of the calves fed from this height. Losses stopped immediately.

Symptoms of lipoid pneumonia are similar to those of various calf barn infections, including intermittent fever, poor appetite, loss of weight, coughing, and labored breathing.

Rotate calf pastures, too

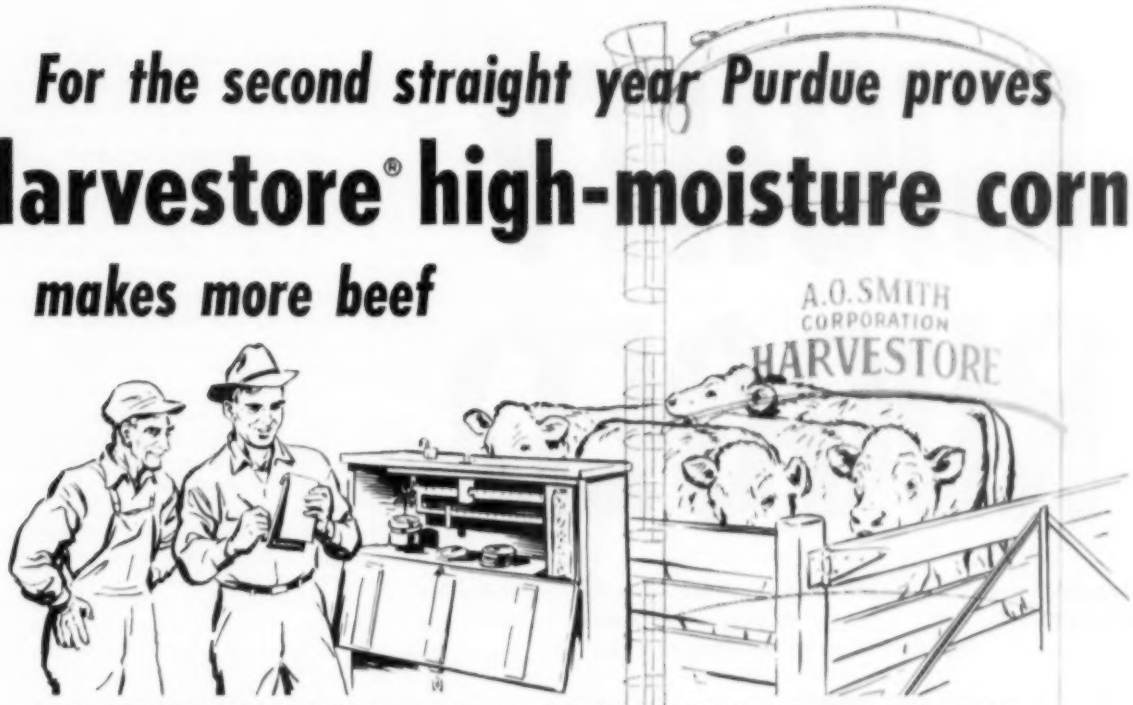
Do your calves run in the orchard year after year? Or in a little lot that is handy to the barn and isn't much good for anything else? If they do, remember the old saying: "Permanent pastures propagate parasites." These include tapeworms, lungworms, liver flukes, and various kinds of roundworms, found in the digestive tract.

Calves are especially susceptible, since older animals are likely to have developed considerable immunity through repeated exposure. Your calves will be healthier if you rotate their pastures regularly. In addition, the rotation will give you a chance to reseed the ground so it will produce better pasture.

For the second straight year Purdue proves

Harvestore® high-moisture corn

makes more beef



Cattle fed HARVESTORE 32½% moisture corn took 10-15% less corn per pound of gain than cattle on 15½% moisture dry-cribbed corn.

Again this year, Purdue University proved the value of picking, storing and feeding high-moisture corn (32½%). The two-year results: Savings because of better feed performance alone amounted to free corn for one steer out of eight*. Why were these savings possible? Because only the HARVESTORE sealed, *oxygen-free* principle makes possible the storage of high-moisture corn.

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Double cropping. Corn off early leaves land free for sowing small grain cover crop. Use of higher yielding, later maturing varieties is also possible.

All these advantages are part of the new and better way of farming made possible by HARVESTORE. Even if ready cash is a problem, you can take advantage of these HARVESTORE benefits . . . ask your dealer how the HARVESTORE can be purchased out of earnings. For the complete high-profit HARVESTORE story, mail coupon today.

*On a dry matter basis, cattle on 15½% moisture corn ate 13.45 lbs. daily . . . cattle on 32½% moisture corn ate only 11.88 lbs. daily to produce the same gain.

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They're AccuRated

DUNLOP TIRE AND RUBBER CORPORATION, BUFFALO 5, N.Y.

A thousand miles

From page 44

If you're bothered with hay fever, Duluth will hold a special interest for you. It is known as the "Air Conditioned City of America" and a haven for hay-fever sufferers. The Hay Fever Club of America, Inc., has maintained its summer headquarters here for more than 30 years.

At Duluth you'll want to see the Aerial Lift Bridge which spans a ship canal. This bridge is the second of its kind in the world. At Duluth-Superior harbor, America's second largest port in tonnage shipped, trains will be unloading their ore into ships. A total of 276 ships, the ore industry's navy, moves the graded ore to the steel furnaces via the Great Lakes. The ships' total capacity is more than 3,000,000 tons per trip. The larger vessels are more than 700 feet long.

Should you plan your vacation the early part of August, Duluth has special entertainment in store for you. Their International Folk Festival takes place the first weekend of August. Costumed folk dancers from many nations are represented and visitors are offered culinary delights from many other countries.

You'll leave Duluth on the famous North Shore drive. Your next 60 miles will be "startling scenery." Rushing rivers, with spectacular cascades and waterfalls, boiling through rocky beds, tumble down from the uplands and into Lake Superior. Breath-taking cliffs, long stretches of forest, and a rocky shoreline make this lake-shore drive unforgettable.

At Illgen City, you turn into State Highway 1 for a 63-mile drive through the wilderness of the Superior National Forest to Ely. This area, known to the natives as "the wilderness country," is one of the favored "jumping off" places for campers. And the *camp-out-week* type of vacation is becoming increasingly popular among budget-minded vacationers.

At Ely, International Falls, Grand Marais, and many other places in this canoeing country, outfitters have all the necessary camping equipment for rent. This includes canoes, a tent, air mattresses, gear of all kind, fishing tackle, cooking and eating utensils, all kinds of specially selected dried and canned foods, and even the sturdy type of clothes best suited for outdoor living.

A camping party can take off in canoes and soon be in the most beautiful wilderness country in the world for as little as $5 to $6 per day per person.

Hundreds of miles of portage routes for the canoe and camp enthusiast have been clearly marked by the United States Forestry Service. You'll find rustic camps, picnic grounds in this National Forest.

As you leave the wilderness country of Ely on Highway 169 toward Hibbing you will see unforgettable scenes of men, cars, and machinery struggling in the great drama of steelmaking.

In the Vermilion and Mesabi Iron Range country, monster power shovels

will be scooping tons of earth at a bite and dropping it with a clang into the open laps of red-bellied hoppers.

The Hull-Rust Mahoning mine at Hibbing is the largest open-pit mine in the world and the most stupendous excavation ever dug by man. Here man has moved more earth than was moved in building the Panama Canal. Sixty percent of all the ore mined in the United States is produced in Minnesota and the Mesabi Iron Range near Hibbing produces 90 percent of the state's iron ore.

At Hibbing, you're only 93 miles from International Falls—port of entry to Canada, a nation which each year welcomes visitors numbering almost twice her own population.

To assist immigration officials of both nations to speed your crossing, you should carry identifying papers such as birth, baptismal, or voter's certificate; driver's license, or special letters. If you're not a native-born United States citizen, you'll be asked to show your naturalization certificate or alien registration receipt card.

Be sure you have your car registration card. If you don't own your car, secure written permission from the owner to bring the car into Canada and have the registration card.

Your re-entry into the United States will be simplified if you'll list all your purchases before you reach the border, keep sales receipts and invoices handy, and pack purchases separately for convenience of inspection.

For full details on regulations pertaining to purchases, pets, foods, boats, and other things of interest to you, write to the Canadian Government Travel Bureau, Ottawa, Canada, for their publication "How to enter Canada."

As you drive the 143 miles to Kenora, you'll be in the Lake of the Woods country. This lake has 14,000 islands, more than any other lake in the world.

Here, you can find the mighty muskellunge, or popular northern pike, the appetizing walleyed pike, and the fighting black bass, or lake trout.

If you prefer to fish in virgin waters in the Canadian Northland, plan a side trip from Kenora. Outfitters are ready to fly you to camps farther north.

Make your reservations for lodgings as far in advance as possible, says the Ontario Department of Travel and Publicity. Facilities are sometimes crowded to capacity on weekends or over specific holidays. Your reservation should be accompanied by a deposit which will be applied against your accommodation account when you arrive.

On your way to Winnipeg you'll leave the province of Ontario and enter Manitoba. Winnipeg, its capital, is a big bustling city with excellent stores.

As you leave Winnipeg to return home, you'll travel south through the rolling wheatlands. This route runs through the heart of the Red River Valley—"the bread basket of the world."

After this 70-mile drive you'll reach Noyes, the United States port of entry where customs and immigration officials await you. Ninety-two miles later on highway 75, you're in Crookston; 75 miles farther on along Highway 2 and you will be in Bemidji.

Bemidji was one of the last areas opened to settlement along the Mississippi between Lake Itasca and the Gulf.

Along the lake shore near the city's Information Center are the giant figures of Paul Bunyan, Minnesota's legendary hero, and his blue ox, Babe. They stand almost 20 feet high in steel and concrete.

Just 32 miles southwest of Bemidji is the Itasca State Park, Minnesota's largest, a vast domain of 32,000 acres. Here the Mississippi River gets its inspiration for the long journey to the Gulf, making it one of the great rivers of the world. You can walk across the small stream where it begins to flow northward for almost 100 miles before turning south.

As a final chapter to what can be your most memorable vacation, take a horseback ride along the park's numerous trails and enjoy the acres of unspoiled beauty. You'll see magnificent virgin Norway and white pine, deer which roam the area at will, and crystal-clear, blue lakes. You'll be glad that you took time to see the "Northland."

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Absolutely Highest prices paid for New Goose and Duck feathers. Free tags and shipping instructions. For top prices on used feathers mail sample to Northwestern Feather Co. Department B, 212 Scribner N.W., Grand Rapids, Michigan.

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Two Beautiful 8x10 Oilcolor portraits from any photo or negative (returned) $1.00.
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Sensational Garden Tractor. Hoes Between plants and rows, including strawberries. Eliminates hand hoeing. Nothing else like this. Patent 2742840. Also this Fantastic offer to first few inquiries. Auto Hoe, DePere 35, Wis.

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MAKE MONEY, BONUS & PRIZES for your club, your church or yourself—take orders for DAY-n-NIGHT Markers. Write for details.

WE SHIP WITHIN 48 HOURS
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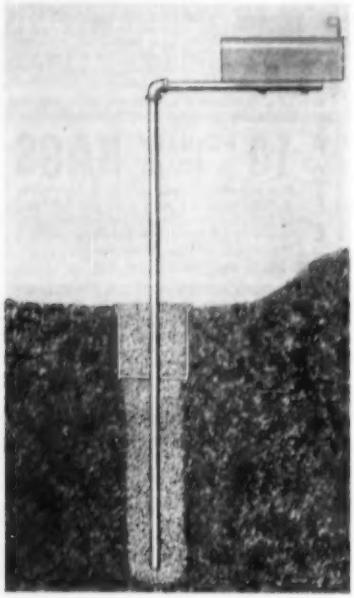
All around the farm. A page written by our readers

My mailbox support is neat, and built and set so that if box is struck by a snowplow it is turned aside without damage (see drawing below). The upright 1½" pipe is 4 feet in the ground and extends above the roadbed level. The base is set back in the roadside ditch.

To set the upright post, I dug a hole

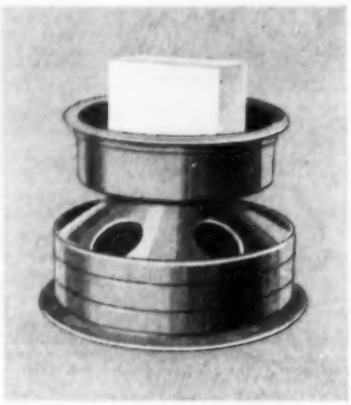


large and deep enough to hold a 5-gallon oil pail, then went down with a posthole digger to the 4-foot depth. I set the pipe in a fill of broken or small stone. The box was fastened on the arm by drilling 2 holes and bolting it securely in place.—*G. H., Minnesota.*

Cow-path gullies bothered us until we noticed by accident that cows walked around a bramble that had grown across the path. Now we place a few locust or other thorny tree limbs here and there across a path over rolling pastureland, and the cows make a new one. The old path grows shut and no more gullies are formed by runoff water in a cow path.

Five minutes per month moving a tree limb now and then can save hours and hours of ditch filling.—*J. B., Nebraska.*

A simple holder for brads when starting them with a hammer is a slit eraser on a pencil. The brad is placed in the slit where it will be held where desired until it has been started.—*J. K., Ohio.*

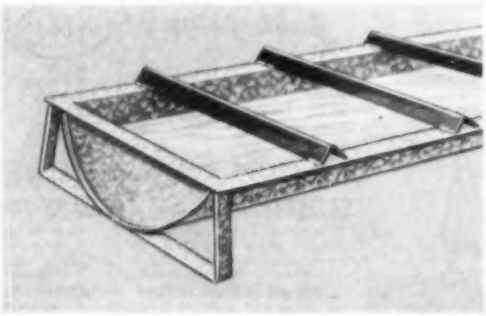


Our salt block holder for livestock was made from two old truck wheels. Any size wheels welded or bolted together (as shown in drawing above) will keep salt clean at all times, and livestock cannot push it over. It can be moved to any location where needed.—*L. V. E., Ohio.*

With reflector tape (obtainable from any auto store or service station) I lettered my name on our mailbox. I cut the 1" tape into strips ½" wide. The lettering is read very easily in daytime and at night it shows up equally well by reflection from cars' lights.—*V. L., Illinois.*

Broken hacksaw blades may give additional service as hacksaws in tight or difficult places if clamped firmly in vise grips. It has worked well on our farm.—*F. J. K., Wisconsin.*

To prevent shifting of hay bales on my hayrack I secured 4x4 stock along the rack sides, stripped the floor crosswise every 3' with crating lumber, and then had the entire floor area covered with automobile undercoating.—*C. L., Iowa.*

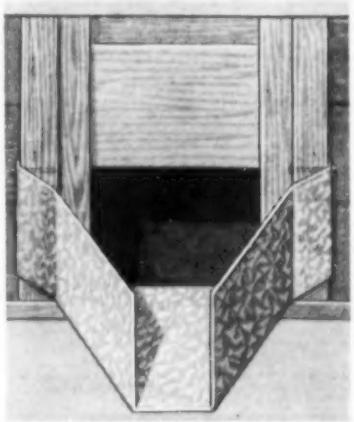


When drilling fence-post holes with a tractor-driven auger, here is an easy way to spot the exact location for each hole. As the alignment and distance for each hole are measured, we carry along a bucket of dry lime and a small scoop. The exact spot for each hole is marked with a dash of lime.

By using this method the tractor operator can readily see where to set the point of the auger. This helps make the job of fence building an easier one on our farm.—*R. M. C., Illinois.*

We built a chute onto a wide truck endgate to funnel grain from dump boxes into smaller elevator boots. The chute is made of light sheet metal, brazed together and fastened to the truck with ¼" stove bolts (as shown below). Sides of chute are 10" high. A slide covers the opening throught the endgate.

When the truck is in the right location to dump into auger box or elevator boot, the slide is lifted and the grain slides to the rear of truck and through chute without spilling.—*K. W. J., Kansas.*



Angle-iron fenders for our feed troughs save feed as compared to flat boards we formerly used. Then quite a bit of feed collected on the top and was blown or pushed off onto the ground.

The feed falls back into the trough when fenders like those in drawing at left are used.—*J. L. A., Iowa.*

Successful Farming invites you to share your ideas with the rest of our readers. We pay $5 for each item upon publication, but regret we cannot return those we don't use.—The Editors

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can MAKE you MORE MONEY

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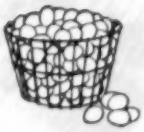
If you've had an opportunity to view a big, open, grain-heavy head of DEKALB HYBRID SORGHUM, you can well-imagine how much EXTRA GRAIN can be harvested from a DEKALB FIELD. And, like seed corn, more farmers plant DEKALB than any other hybrid sorghum in America.



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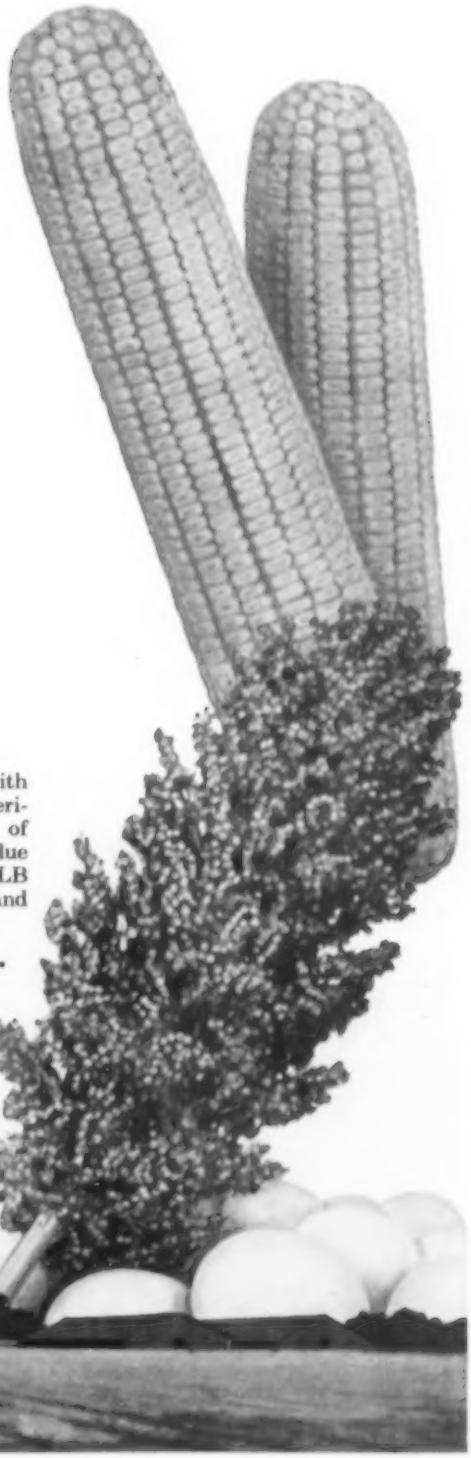
All over America DEKALB LAYERS are showing poultrymen that it's high, steady production, year after year, that really counts. DEKALB's fine, white-egg-laying pen won the 3-year-average, seventh California Random Sample Egg Laying Test . . . averaging 254 eggs per pullet, (based on the number of pullets at one week of age). Income over feed cost for this period was $4.71 per hen.



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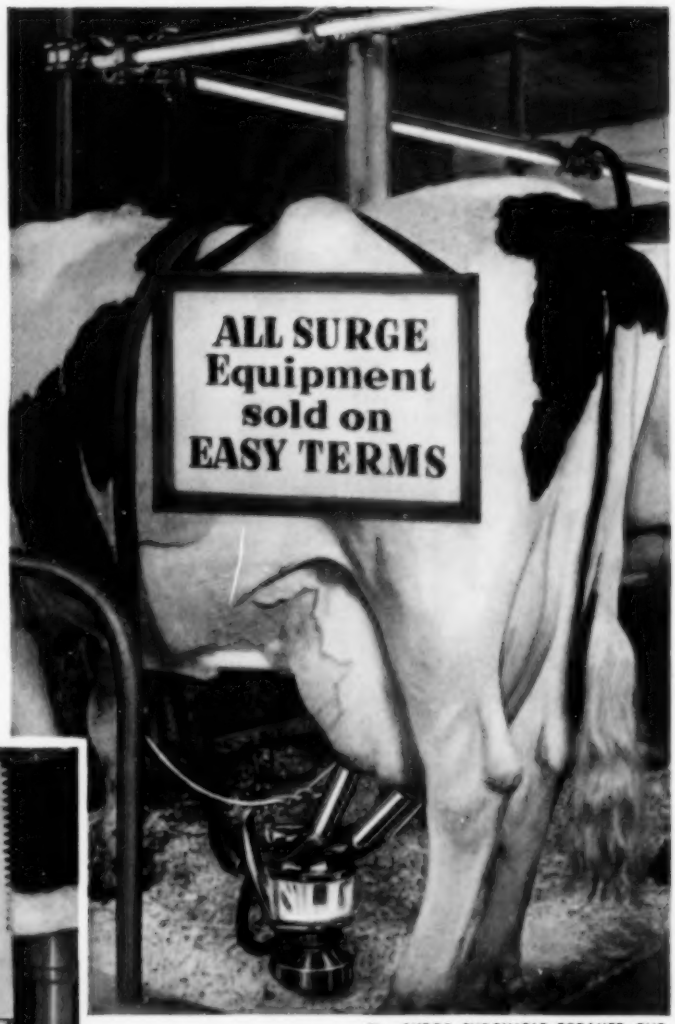

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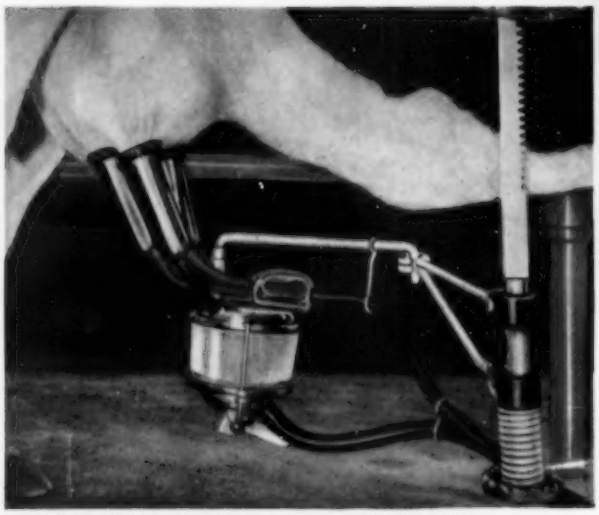

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